THE JOURNAL OF THE AMERICAN OSTEOPATHIC ASSOCIATION

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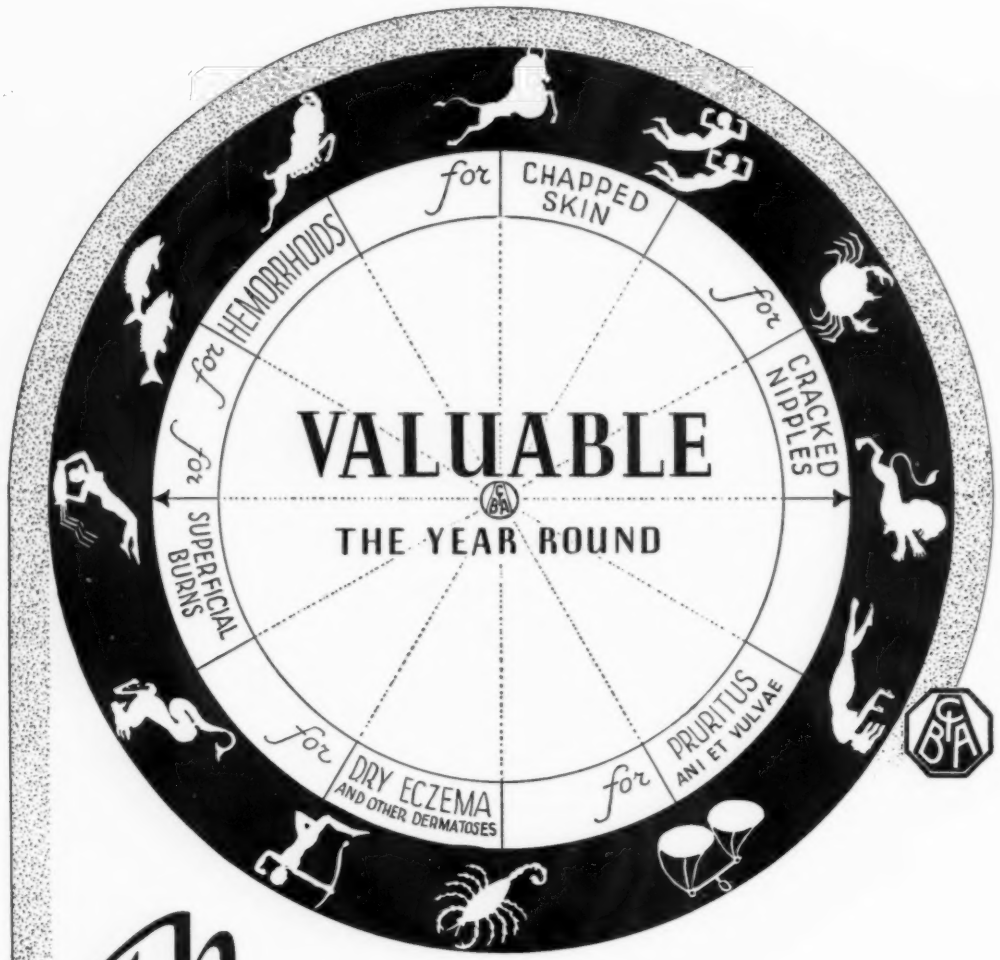

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A striking example of the influence of one of these factors is the relative richness in iodine of field crops raised in certain coastal regions of this country where the soil is also high in iodine.

From the point of view of those concerned with human nutrition, interest in the mineral content of the food supply is usually centered around calcium, iron and iodine; since it is generally agreed that of all the essential minerals, these are the ones most apt to be inadequately supplied by the average varied diet. Conservation of these minerals in foods is, therefore, a matter of considerable practical interest.

Unlike the vitamins, minerals are not lost during storage of fruits and vegetables. However, solution losses during cooking may be severe, due to the fact that most minerals, as they occur in the plant, are soluble, or at least are extractable, by the water in which they are cooked. For example, cabbage cooked by the usual home method has been shown to lose from 21 to 72 per cent of its calcium (2).

As exemplified by these studies, solution losses of minerals in leafy vegetables are usually high. Losses in vegetables as a class are not, however, so excessive, as indicated by an average reported loss of 19.5 per cent of the calcium in seven common vegetables (3).

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(1) 1936 J. Nutrition 11, 55.
(2) 1936 J. Home Econ. 28, 18.
1925 Ibid, 17, 265
(3) 1935 J. Home Econ. 27, 376
(4) 1917 Amer. J. Dis. Chila, 14, 34

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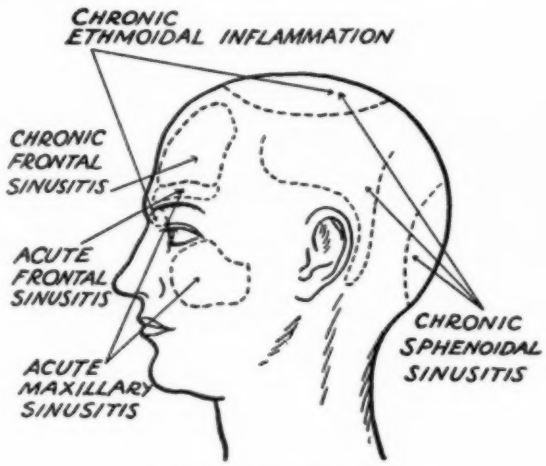

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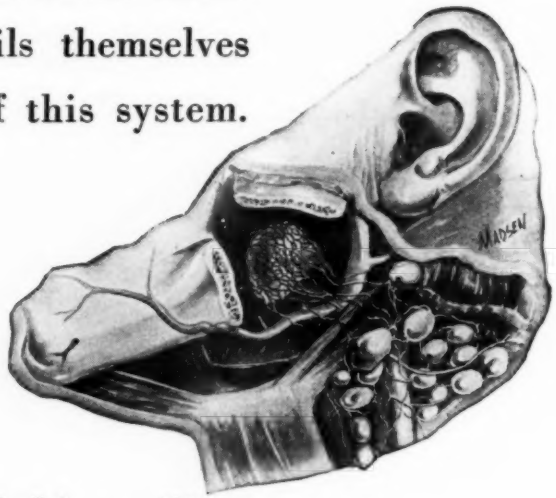

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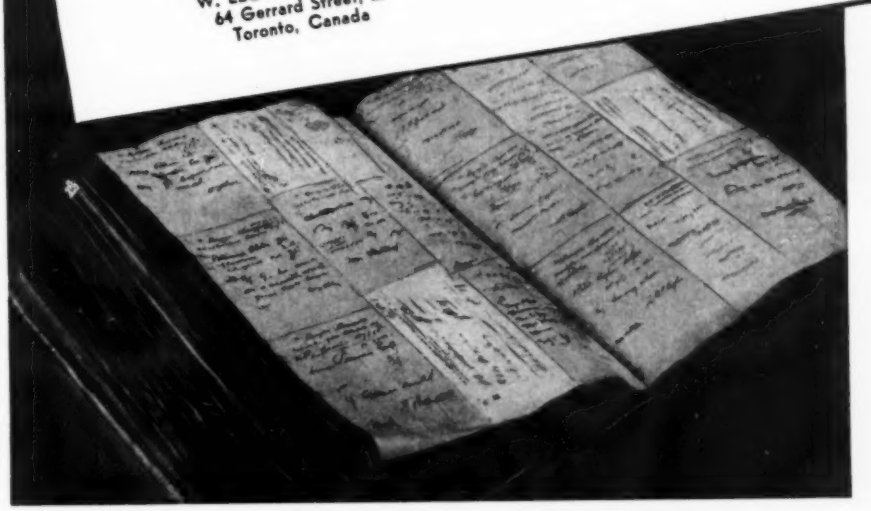

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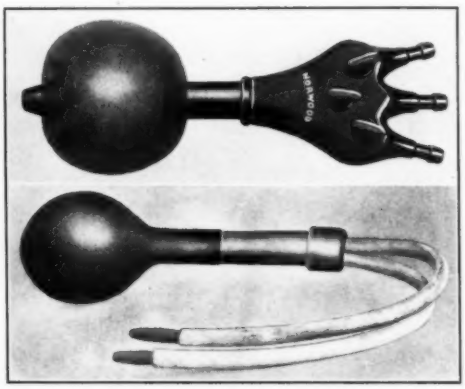

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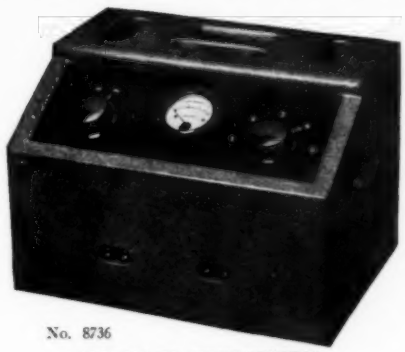

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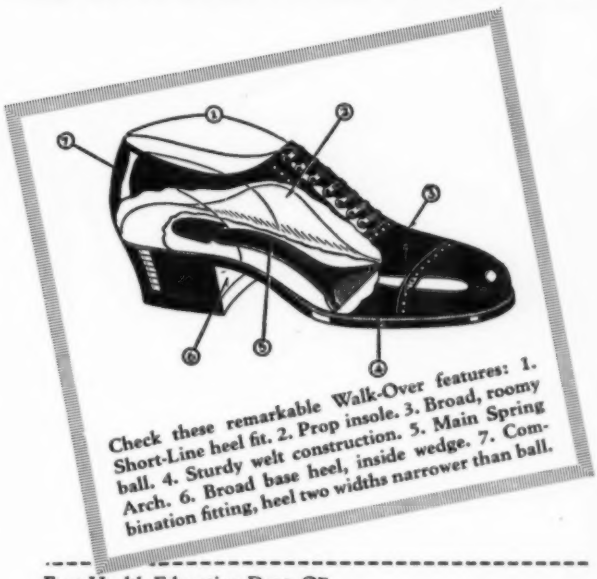

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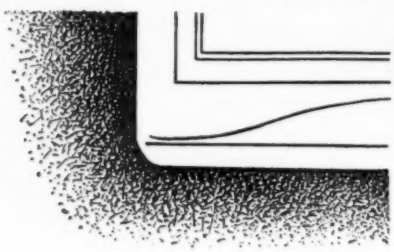

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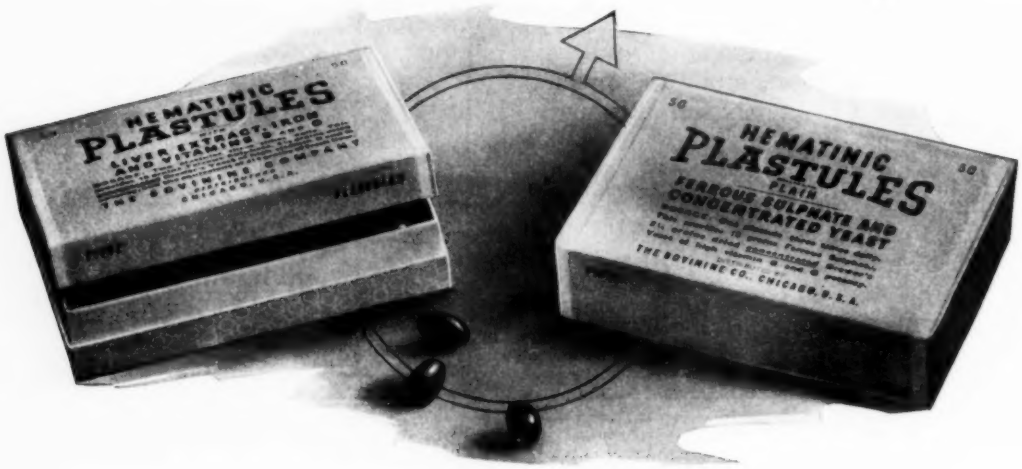

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Symposium on the Heart Failures of Middle Life*

Statistical Review and Social Aspects

RALPH L. FISCHER, D.O., M.Sc. (Ost.)

Professor of Practice of Osteopathy and Clinical Osteopathy
Philadelphia College of Osteopathy

It is the plan of this symposium to review briefly the conditions of the heart and blood vessels that may result in circulatory failure in middle life.

From the social aspect, sudden death from heart failure occupies the first position among circumstances which remove persons from their work. Such a catastrophe often leaves the victim's family in want or his business in a precarious condition.

Cardiac invalidism occupies the second position. It ofttimes requires economic and psychological adjustments. In this exigency, the physician must be able to recognize the clinical criteria of the underlying cardiovascular pathologies, in order to determine the amount of energy which may be expended safely in the pursuit of a livelihood.

The incidence of the various types of cardiovascular disease which may lead to circulatory failure in middle life is pertinent. The records of 1,200 recent cases of persons between 35 and 55 years of age admitted to the outpatient department of the Philadelphia College of Osteopathy, show that heart conditions occurred in 159, or 13 per cent. One hundred and eleven or 9.25 per cent of the 1,200 patients suffered from myocardial disease, thirty-eight or 3 per cent from aortic pathology, nine or less than 1 per cent from valvular defects and but one or less than .1 per cent from coronary disease. (Table No. 1).

In the same series of cases, malignancy occurred in sixty-six or 5.5 per cent, pulmonary tuberculosis in twenty-four or 2 per cent and kidney disease in fourteen or 1 per cent, the combined percentage being 8.5. It is apparent that in the middle period of life, cardiac pathology is found fifty per cent more often than the three common diseases named above. (Table No. 2).

The occurrence of only one case of coronary disease among 1,200 outpatients may be explained by the social status of the clinic patients in whom the incidence of coronary disease is much less than in private practice. It is significant that among 200 admissions to the inpatient department (Philadelphia Osteopathic Hospital), there were eleven instances of coronary disease. This is more than 5 per cent of hospital clinic patients. When it is considered that a majority of the 200 admissions were for tonsillectomy or other minor procedures, the 5 per cent of the total represents a very conservative estimate of the statistical importance of coronary disease in middle life.

FOUR TYPES OF FAILURE

When the cardiovascular failures of middle life are studied critically, four groups may be classified clinically: first, congestive failure (the result of valvular defects or intrinsic myocardial disease); second, aortic pathology (causing left ventricular failure); third, coronary occlusions; and fourth, arteriosclerosis and cerebral apoplexy. Though the principles of therapy are directed toward establishing adequate peripheral circulation in all cases, our considerations here are divided in such a way that the practical points of each group will be emphasized, in order that the physician may promptly identify the circulatory defect and direct his management accordingly.

PROGNOSIS

Though the sudden, severe attack of heart disease is more dramatic, the gradually failing heart is the more common. It is important to review the prognoses of heart failures based on the general type of pathology. In coronary and cerebral vascular disease, a sudden and fatal outcome may be expected, therefore, steps should be taken to lessen the danger. Death in either case is brought about by the obstruction of

TABLE No. 1
INCIDENCE OF CARDIOVASCULAR DISEASE IN 1200 CASES
AGES, 35 TO 55 YEARS
Outpatient Department Philadelphia College of Osteopathy

CLASSIFICATION	NUMBER	PER-CENTAGE
Myocardial Disease	111	9.25 per cent
Aortic Pathology	38	3 per cent
Valvular Defects	9	1 per cent
Coronary Disease	1	.1 per cent
TOTAL	159	13.+ per cent

TABLE No. 2
RELATIVE INCIDENCE OF CARDIOVASCULAR DISEASE
TO OTHER COMMON CAUSES OF DEATH IN 1200 CASES
35 TO 55 YEARS OF AGE
Outpatient Department Philadelphia College of Osteopathy

CLASSIFICATION	NUMBER	PER-CENTAGE	TOTAL PER-CENTAGE
Malignancy	66	5.5%	
Pulmonary Tuberculosis	24	2%	
Kidney Disease	14	1%	8.5%
Cardiovascular Disease	159	13+%	13+%

*Delivered by members of the faculty of the Philadelphia College of Osteopathy at the Fortieth A.O.A. convention at New York, 1936.

the flow of blood to tissues necessary to life. Similar severity of early symptomatology may be encountered in aortic disease, the result of failure of the left ventricle. In left heart failure, there may be a sudden peripheral demand greater than the left heart can accommodate. On the other hand, in congestive heart failure, automatic defensive mechanisms are started in the various organs and in the vascular tree, which prevent sudden circulatory emergencies arising from cardiac pathology.

This mechanism can best be exemplified by the pathological physiology accompanying a mitral valvular defect. The increasing circulatory load is first relieved, in this process, by the large vascular bed in the lung. While it is true that pulmonary and bronchial congestion result in cough and hemoptysis, this safety valve or compensatory mechanism arising in mitral stenosis or insufficiency prevents sudden death. However, when this mechanism can no longer accommodate itself to greater demands as the pathology increases, the burden is thrown upon the right ventricle, which furnishes a second barrier to immediate imbalance, by increasing in size. When it fails, the result is hepatic congestion, with digestive involvement. These patients, then, do not die suddenly, and may best be appraised as to symptomatic diagnosis, on a basis of respiratory or digestive complaints. In many of them, clinical progress or retrogression is most accurately determined by percussion and palpation of the liver, or study of the lung fields.

MANAGEMENT

The management of each case is individual and must be based upon the physiopathologic alterations handicapping the patient. The American Heart Association has classified persons suffering with organic heart disease into three groups.

Class I comprises patients with organic disease but able to carry on ordinary physical activity. Among these are few in whom a sudden exitus may be anticipated. They may be observed from time to time, and reclassified as circumstances require. The prognosis under osteopathic management is very favorable; there is no measure more effective in the preservation of myocardial nutrition and tone.

In Class II, a critical analysis as to the amount of work the patient is capable of, is essential in the restriction of activity and in the establishment of manipulative procedures to be used. Caution is the watchword, for some of these patients may die as a result of too great enthusiasm in treatment, work, or play. Again, however, the agency most efficient in maintaining myocardial function is spinal osteopathic treatment. No drug has proved efficient for more than temporary effect, and none is curative.

Class III is the most severe and most important; in it are found the patients who are unable to carry on any physical activity. It includes those who must be observed frequently and guided carefully. Here, the osteopathic physician is confronted with the necessity for critical appraisal of pathology and pathological physiology. It must be kept in mind constantly that spinal treatment uses some of the patient's energy and his cardiac reserve. The limitations of each case must be studied on an individual basis, and the manipulative procedures applied in a manner which is conducive to effectiveness, yet with a minimum pull upon the patient's vitality.

There can be no routine in the care of the diseases leading to heart failure in middle life. Each patient, and each event in his disease must be analyzed on a basis of pathology, physiology, clinical diagnosis, and principles of treatment. Rest and diet, as well as agencies for the relief of dyspnea and pain, such as oxygen inhalations and short-wave diathermy constitute some of the necessary adjuncts of manipulative therapy. The essential fundamentals of the enumerated factors will be discussed in the papers to follow.

6112 Germantown Ave.

Certain Pathologies Responsible for Heart Failures in Middle Life

OTTERBEIN DRESSLER, D.O., M.Sc. (Ost.)

Professor of Pathology, Philadelphia College of Osteopathy

In introducing this paper on the pathology of the lesions to be discussed in this symposium, I feel that it is only fair to state that no attempt has been made at completeness, and that etiology and pathogenesis particularly have been slighted in the interest of conservation of space.

Chronic mitral disease has its origin in acute simple endocarditis. The lesions of this process are located on the surface of the mitral curtain exposed directly to the flow of blood and are about 2 mm. behind the free edge although they may spread onto the chordae tendineae. Healing of these lesions brings about cicatricial contraction of the valve flap and sometimes of the chordae tendineae, deforming the mitral orifice. These changes are spoken of as chronic endocarditis of the mitral valve or chronic mitral valvulitis. The deforming processes may consist of direct shortening of the curtain, the flap may curl upon itself, the chordae tendineae may be shortened preventing closure, or the flaps may become adherent to each other. Any or all of these changes may be present in combinations.

In mitral insufficiency, sclerotic and cicatricial changes occur in the mitral curtain so that the mitral orifice is incompletely closed in systole. These deforming processes follow the general plan detailed above. The curtain is thickened along the free margin or just behind this portion, it curls upon itself and the chordae tendineae are shortened to prevent closure. In other instances, previous ulcerative processes may have destroyed the chordae tendineae and portions of the valve flap. In some cases the mitral curtain may have been penetrated by such ulcerative disease.

The insufficient mitral curtain allows blood to be thrown back into the left atrium in ventricular systole. The atrium dilates and must hypertrophy to perform the added work. Some back pressure occurs into the pulmonary circulation, raising its pressure, a factor in the production of pulmonary arteriosclerosis. The right ventricle must hypertrophy to maintain the pulmonary circulation at increased tension. If the right ventricle is unable to provide for this added work, decompensation takes place with back pressure into the peripheral venous circulation. Such decompensation is marked by intense passive hyperemia of the liver producing the nutmeg liver, congestion of the spleen with cyanotic induration, and a generalized

anasarca with marked tendency to the production of massive ascites.

Mitral stenosis develops in much the same manner as mitral insufficiency. It is a progressive sclerosing process induced by spread of the initial process of fibrosis. The margins of the curtain may become adherent and the dense fibrotic valve assume a "puckered" appearance. With contraction of the chordae tendineae and the fibrotic papillary muscles, the mitral orifice assumes a "funnel shape." In the "button hole" stenosis, the thickened fibrous curtain produces a transverse diaphragm between the atrium and ventricle with a transverse slit.

The problem in mitral stenosis is to empty the left atrium. In order to accomplish this, hypertrophy of the atrium occurs early. Back pressure into the pulmonary circulation is also an early problem. As noted in mitral insufficiency, the key to compensation lies in the myocardium of the right ventricle; when it fails, decompensation occurs. Chronic congestion of the bronchi and lungs, constituting "brown induration" of the lungs, and pleural effusions are common in this lesion.

At this point it is well to note that from the standpoint of the pathologist a purely stenotic or a purely insufficient lesion of a heart valve is rare. It will be remembered that heart valves open and close by floating in the blood stream by virtue of their flexibility. In chronic endocarditis where the valves are fibrotic, they invariably offer some resistance to the flow of blood; therefore, all are in some measure stenotic. In like manner, the deformed valves are unable to close the orifices completely so that all are in some measure incompetent. The terms "stenosis" and "insufficiency" should be interpreted as meaning that one or the other mechanism predominates in a given lesion.

Arrhythmias are relatively common during the course of chronic endocarditis and are the result, at least in part, of involvement of the auriculoventricular bundle of His in the sclerotic process. The bundle passes down the interventricular septum in relationship to the mitral curtain and the aortic valves. The scar of chronic endocarditis grows and in some instances may extend through the bundle.

Chronic lesions of the aortic valve are in some ways similar to those in the mitral curtain. There are, however, several important differences. The arrangement of the valve as cusps instead of as a curtain, and the lack of chordae tendineae make these lesions mechanically different. The liability of the aortic valve to changes coincidental to, or as a part of, syphilitic aortitis and the reported frequency of atherosclerotic changes in the aortic cusps makes the etiology different.

In aortic insufficiency, the aortic cusps are unable to close the aortic orifice adequately in diastole. Such a defect may be produced by sclerotic deformity of the valve cusps with curling of the cusps upon themselves. In syphilitic aortitis, there is the added factor of separation of the cusps at their commissural junctions which allows leakage. Less frequently, aortic regurgitation results from rupture or perforation of the valve cusps.

The burden in aortic regurgitation falls upon the left ventricle which must expel, in each systole, its normal quota of blood plus what has regurgitated during diastole. Compensation is maintained by left ventricular hypertrophy which in this lesion may be enormous, constituting "cor bovinum." Along with hypertrophy, there is some dilatation, since the ventricle now must accommodate its usual quota of blood plus the amount regurgitated during diastole. During systole, the increased volume of blood is driven into the aorta with great force by the hypertrophied left ventricle; during diastole the aortic pressure drops suddenly due to the regurgitation. This intermittent flow of blood, characterized as Corrigan's "water-hammer pulse," has a profound effect on the coronary system, bringing about exhaustion.

Aortic stenosis is the rarest left side valvular lesion of the heart, occurring only 48 times in Norris' series of 9,940 cardiac cases at autopsy. Considering the pathogenesis of syphilis, we do not believe that syphilis ever does or can produce aortic stenosis. Atheromatous degeneration and changes secondary to acute simple endocarditis are the probable etiological factors. The valve cusps become thickened and stiff, and may fuse along their free margins, producing obstruction to the emptying of the left ventricle. The problem in this lesion is to empty the left ventricle past this obstruction. This results in the most common form of concentric hypertrophy of the left ventricle in which the cavity of the ventricle is approximately normal in size but the myocardium is greatly thickened. Only as decompensation takes place does appreciable dilatation occur. It is obvious that the key to compensation in this lesion is the nutrition and integrity of the left ventricle.

It will be observed that the integrity of the myocardium dominates the problems of chronic valvular disease. Exhaustion of the myocardium in these processes is, therefore, an important factor in that great group of conditions referred to as myocardial degeneration and myocardial failure. Disturbances of nutrition by vascular disease of the coronary system is also an important factor in this respect and is referred to later. Lastly, there is that vague category of so-called chronic myocarditis, the lesions of which are not inflammatory at all but rather degenerative in type. Metabolic disturbances and particularly a sedentary life have much to do with this group of pathologies. Pathologically, "brown atrophy" is an important change.

Because of the intimate relationship of the aorta to the heart, its diseases must be considered as factors in the heart failures of middle life. It is proper to place syphilitic aortitis as the first lesion. Warthin is quoted as saying that all syphilitics will show some lesions of the aorta. Certainly, it is one of the commonest and most characteristic lesions of syphilis. The peak age incidence is 30 to 55 years. The ascending limb and aortic arch chiefly are involved. The localization of these lesions is explained on the basis of unusual abundance of lymphatics in the adventitia of this area, the organism gaining its entrance by that route.

The lesions of syphilitic aortitis begin a few inches above the aortic valves and progress up and down. Sooner or later the aortic valves are involved as noted previously. They progress distally, but almost never reach the abdominal aorta. The interior of the aorta presents an appearance resembling the bark of a tree. There are longitudinal ridges with intervening furrows. These changes have an abrupt

termination usually in the thoracic aorta. The essential lesion progresses about the lymphatics from the adventitia into the media, weakening the latter structure even to the point of necrotic mesaortitis and weakening of the arterial wall. The intimal changes are hyperplastic and compensatory to the medial weakening. The aorta dilates to bring about the separation of the aortic cusps noted under aortic insufficiency. The longitudinal furrows may obstruct the mouths of the coronary arteries.

The weakening of the media by syphilis also explains the relationship of syphilis to aneurism of the aorta at this point. The aneurism is a more or less localized bulging of the aorta due to a weakened media. The intima bulges through the weakened media to produce a sac. When observed in the gross, as those specimens in the scientific exhibit, the intima is seen to be rolled into and about the mouth of the sac. The intimal lining of the sac is usually destroyed. As time progresses, more and more thrombotic material is rammed down into the sac, so that large masses of organized material are found within. The dangers of rupture of the sac and the possibility of embolism from the thrombotic materials must be apparent.

Coronary disease is one of the most common causes of sudden cardiac death in middle life. It might be well to divide the coronary pathologies into two great groups: (1) those which are acute and occlusive, and (2) those which are more chronic and may or may not be occlusive.

The first, or occlusive group of lesions, produces most dramatic manifestations. While the individual may have had some previous evidences of coronary disease, in the acute attack he probably felt well one minute, and in agony and extremis the next. It is not our province to detail symptoms, but we must point out that the manifestations of this process are essentially those of acute ischemia of the ventricular myocardium.

The mechanisms of coronary occlusion are several: (1) Embolism is much spoken of but less frequently seen. An embolus rarely comes from the systemic circulation. It might, however, arise in some instances from a vegetation of an acute endocarditis. (2) Syphilitic aortitis producing its longitudinal folds in the root of the aorta may seal over the mouths of the coronaries. (3) Thrombosis of the coronaries is probably more frequent and is often superimposed upon atheromatous degeneration or atherosclerosis. The thrombosis itself may be responsible for the occlusion or a fragment of the thrombus may break loose and float more distally in the coronary system bringing about occlusion. (4) Arteriosclerosis per se may be responsible for the coronary occlusion.

Whatever the mechanism of the occlusive lesion, an ischemic infarct and possibly anemic necrosis, is produced in the heart muscle. If thrombosis of the coronary artery was not the original mechanism, it frequently completes the damage in the vessel. If the occlusion is more gradual, some collateral circulation is established.

The vessel most frequently affected is the descending branch of the left coronary. The infarct, therefore, will most frequently be found on the anterior surface of the heart toward the apex and the anterior portion of the interventricular septum. The infarcted zone is irregular in size and shape, white or yellow in color, and frequently outlined by a deep red surrounding zone. Softening (myomalacia) may result in rupture of the heart directly, or aneurism of the heart may develop. The rupturing of such an aneurism is another cause of sudden death. Within the heart chamber thrombosis may develop with embolism and infarction of other organs. A varying amount of irritation occurs on the pericardial surface with evidence of pericarditis, which may cause the pericardium to become adherent to the heart at this point.

Not all cases presenting these lesions die in the acute phases and certain reparative changes may take place. Small defects in the myocardium may heal by formation of a cicatrix. Large areas will result in thinning of the myocardium, dilatation (aneurism), and permanent myocardial insufficiency.

Of the nonocclusive coronary diseases of a more chronic nature, we would list (1) circulatory disorders in which the heart is unable to maintain coronary pressure, as mitral disease, aortic disease, or myocardial degeneration; (2) reduction in the oxygen carrying power of the blood, as in the anemias and anoxemia; (3) sclerosis of the coronaries without marked narrowing, but with loss of elasticity and power to dilate; (4) possible spastic contraction of the coronaries.

Coronary arteriosclerosis, we feel, deserves special consideration. This process falls in that class of arteriosclerosis which we prefer to speak of as atherosclerosis to which the coronary system appears to be particularly predisposed. The etiology and pathogenesis of this process is still speculative. Hypertension is a factor to consider. The high cholesterol diet and hypercholesteremia have many ardent advocates and much experimental support, though the latter is not unchallenged. The effects of poisons on the walls of the vessels, as toxic bodies and organic and inorganic poisons, must be considered. The inhibition of an excess of cholesterol and related compounds by a damaged vessel wall seems to be a good working compromise.

In coronary atherosclerosis there first appear linear yellow streaks which represent fatty deposits in the depths of the intima. The intima becomes thickened, raised, and hyalinized. The lesion may rupture, forming an atheromatous ulcer with possibilities of thrombosis, and the discharge of the contents into the coronary system may produce embolism. Subsequent calcification may transform the vessel into a brittle inelastic tube. It takes little imagination to visualize the effects of this lesion on the coronary system. The raised patches encroach upon the lumen of the vessel, the ulcers may produce coronary thrombosis with subsequent embolism or the calcification may produce narrowed inelastic vessels.

48th and Spruce Streets.

Short-Wave Therapy and Blood Pressure

Short waves have the effect of reducing blood pressure in the healthy subject and apparently an even more marked effect in reducing blood pressure which is pathologically high . . . It means a great deal to a patient when we can reduce a blood pressure of 180 mm. Hg. to 150 or lower for almost two months at a stretch simply by means of triweekly short-wave treatments. — Maria Apel, Jena, Germany, *Medical Record*, 1936 (Sept. 2) 144:229-230.

Pertinent Facts in the Diagnosis of Myocardial Failure

LESTER R. MELLOTT, D.O.

Associate in Practice of Osteopathy, Philadelphia College of Osteopathy

Circulatory balance is delicately maintained in the various parts of the body in order to meet their constantly changing requirements, which vary with the functional demands. The great amount of reserve normally available in the myocardium permits the heart to meet the varying functional demands without evidence of circulatory embarrassment. So long as the reserve of the heart is not exhausted, the patient will remain practically symptom free. Facts for the diagnosis of heart disease may be obtained from:

(1) Subjective manifestations.

(2) Objective manifestations.

(3) Laboratory reports (including fluoroscopic, that from x-ray plates, and electrocardiographic).

(4) History of patient's life (including a careful family history, a detailed account of the infectious diseases suffered, and any symptoms referable to the circulatory system).

It is surprising how much pathology can be present, at times, in the circulatory system, while the patient is practically symptom free. It is evident, then, that some patients will present clinical symptoms, and others physical signs, as the first evidence of disturbed circulation. Since normal function of tissues depends upon a normal blood supply, and pain often is the cry of the nerve for fresh blood, pain may be one of the early manifestations in many cases.

We may divide pain conveniently into two classifications, according to severity and etiology: First, pain which is almost constantly present, but which may be exaggerated upon exertion; it is most common in those slowly progressive cases of failing heart, due to changes in the myocardium itself; second, the severe crushing type of pain of short duration typical of angina pectoris, and seen most frequently in those cases not showing the typical signs of cardiac failure.

The first type of pain may be present in those cases of acute myocarditis, the result of infectious diseases such as diphtheria, scarlet fever, influenza, septicemia, the active stage of rheumatic fever, etc. This pain is usually described as a sense of fullness of the chest, a sense of pressure beneath the sternum, tenderness in the ribs or of the skin over the precordium, and there may be some aching in the left arm or both arms. All these sensations are exaggerated upon exertion. The first type of pain is also present in those cases of failing heart due to mitral and aortic valvular lesions.

The second type of pain is the more striking. It is the type most frequently thought of by physician and patient as being associated with the heart. It is sudden in onset, terrifying in severity; the patient feels as though the chest were being torn asunder. One patient described it as the sensation of a steel comb passing through the chest. Many patients die in the first attack; others survive many such attacks. The mechanism of the production of this pain is not well understood. Some of the cases present no changes in the heart which can be demonstrated on postmortem examination by our present methods. It is probable that some form of pathological lesions, not demonstrable by any means yet known, are present in the heart muscle, and, in addition, that vasomotor spasm plays an important role.

Another significant symptom of cardiac failure, and one that in many cases appears before that of pain, is dyspnea. When aeration of tissues is insufficient to meet metabolic demands, there results an excessive accumulation of carbon dioxide, and a decrease in the amount of available oxygen. Dyspnea is the result.

At first, dyspnea is noted only on rather severe exertion. The evaluation of this symptom is rather difficult. The patient may not be conscious of its presence, or he may state that he seems to be "slowing up"; in other words, he is not able to do the things he was formerly able to do without evidence of respiratory distress. It is this one fact which makes the symptom of dyspnea important. We would not expect an office man to shovel coal into a locomotive without distress even if his heart were normal. We would, however, expect the fireman to be able to do so. Dyspnea of cardiac origin may manifest itself only upon rather strenuous exertion, being more easily initiated as the cardiac reserve becomes more easily exhausted. Marked dyspnea may be present in the form of cardiac asthma of sudden onset, occurring most frequently in the presence of mitral stenotic lesions or in lesions of the aorta. During such attacks, severe orthopnea may be present, cough is annoying and a thick, frothy, and many times a blood-streaked sputum is present.

While dyspnea and pain are the most common manifestations of a failing myocardium, there are frequent cases in which the first manifestation is a sense of general weakness or exhaustion. Such weakness may be most evident in the legs, the patient stating that he can hardly drag his feet along. Diabetics frequently complain of this leg weakness.

Edema is rarely an early manifestation of cardiac weakness. It is usually initiated after other symptoms are well established.

Altered rhythm, evidenced by attacks of tachycardia or palpitation, usually does not occur early in the development of cardiac insufficiency. However, in about 4 per cent of cases it does occur as an early manifestation and frequently becomes very annoying. It is of importance in the later manifestations of cardiac insufficiency.

The early manifestations of a failing myocardium are not confined to the circulatory system alone; other systems of the body are affected by the poor nutrition and suffer accordingly.

Stasis of venous blood, and insufficient arterial blood in the splanchnic vessels, produce digestive disturbances interpreted as a sense of fullness in the epigastrium, loss of appetite, belching of gas, nausea, and frequently vomiting.

In cases presenting coronary disease or a tendency to angina, there are frequently severe abdominal

symptoms simulating acute abdominal crises. In such cases a careful examination of the abdomen will aid greatly in diagnosis.

When failure has reached the point where the tricuspid valve is no longer competent, liver congestion and enlargement results, the degree of such enlargement serving as a good index to the status of the right ventricle.

The nervous system, being composed of a highly specialized tissue, is particularly susceptible to circulatory changes. Such manifestations are in the form of a sense of exhaustion, dizziness, stupor or drowsiness; these sufferers fall asleep easily in a chair, only to find, on retiring, that they spend a sleepless night. They sleep better when propped up in bed. Mental activity is slow; they do not want to be bothered with anything which causes mental activity, and are frequently very irritable.

Headache is common. It may be general or sharply localized and it is more noticeable when the patient is fatigued. Dreams are common and may be very wild and distressing.

Aside from the symptoms already referred to which may be attributed to early myocardial failure, certain facts present themselves to the physician which aid in the determination of the status of the myocardium.

Decrease in cardiac reserve means a decrease in the amount of work the patient is capable of doing without evidence of distress. After a measured amount of exercise, excessive elevation of blood pressure or lack of normal elevation and a slow return of pulse and pressure to near the resting normal, point to an inefficient mycardium.

With a decrease in cardiac reserve there develops a state of passive congestion of the lungs, decrease in the amount of aeration, dyspnea, and, hence, a decrease in the amount of air the lungs are capable of holding. The length of time the patient can hold the breath is greatly reduced—in some cases it is practically impossible for the patient to hold the breath at all.

Irregularities of heart action are not as common in the early as in the late stages of failure, but when present, may have considerable significance. In the later stages of failure, irregularity is common, constituting one of the major signs of advanced failure.

Marked lowering of blood pressure in the acute myocardial case is a rather grave sign, being evidence of a myocardium which cannot meet the normal calls upon it. Elevation of blood pressure, as seen in the case of hypertension, by increasing the load on the heart depletes its reserve and invites early exhaustion of the heart muscle and failure.

Direct examination of the heart will reveal findings typical of the condition causing the failure in the majority of cases while in the rest no typical objective findings will be evident.

In acute myocardial cases presenting grave clinical symptoms, evidence of enlargement is found; the enlargement increasing from day to day as the condition becomes worse. This phenomenon is typically described as a "migrating" apex. The apex beat tends to become diffuse, the heart sounds are accentuated and shortened; the first sound loses its muscular quality, the second pulmonic is accentuated and tends to be reduplicated. The patient is pale and restless. He perspires easily. The amount of urine is decreased and it is concentrated. Edema may be present in the extremities. The liver is congested and enlarged and digestive disturbances are common. But if the patient recovers, the symptoms gradually disappear and the physical findings return to normal. On the other hand, if the condition gradually becomes worse, there is exaggeration of the symptoms and physical findings until congestive failure is complete.

Chronic defects of the mitral valve produce marked enlargement of the right side of the heart and increased pressure in the pulmonary circulation. Murmurs characteristic of the existing lesions are present. The apex beat is well localized and is strong in the well-compensated cases, but as compensation is lost, the murmurs become weak, the apex beat becomes more diffuse, irregular, and weaker.

Congestion of the lung fields is demonstrated radiographically by increased hilar density, and on physical examination by decreased resonance and by fine rales at the base, near the end of inspiration.

As decompensation becomes evident, abdominal distress, distension, vomiting and enlargement of the liver are present. Cerebral symptoms become distressing. The vessels of the neck throb excessively and irregularities are common. Marked and typical changes are noted in the RST segment of the electrocardiographic tracing and in the radiographic examination of the heart.

Patients in this group die slowly, due to the capacity of the lungs and liver to accommodate a great amount of blood and thus relieve the heart. Marked alteration of blood pressure is not the rule.

Disease of the aorta, and particularly valvular defects at the aortic valve, cause marked enlargement of the left ventricle. The load is placed directly on the left ventricle and the peripheral vessels. Marked alteration in the tension in the peripheral vessels constitutes one of the diagnostic signs of this condition. The vessels are noted to pulsate excessively; often the head is noted to bob with each systole. In the regurgitating lesions, the pulse assumes the Corrigan or water-hammer type; blood pressure changes are noted with the systolic pressure greatly increased and diastolic greatly decreased. This marked change is evidenced in the peripheral vascular bed as pallor; there are also severe cerebral symptoms, nervous manifestation, and substernal and precordial pain with dyspnea.

Physical signs of definite left ventricular enlargement and altered aortic sounds at the second right costal cartilage are present. Changes in the RST segment with left ventricular preponderance are noted in the electrocardiographic study. Typical x-ray findings are present.

The heart of coronary disease shows little change on direct examination typical of this condition. A loss of muscle tone with a tendency to shortening and accentuation of second sounds are indications of change in the cardiac function. The symptom complex of pain, dyspnea, and irregularities, is the most outstanding feature of this condition. Alterations of the RST segment, and particularly the T, of the electrocardiograms are characteristic of this condition. Changes in the contour of the heart, particularly the thinness of the ventricular musculature, is noted on x-ray examination.

Hyperthyroidism causes a decrease in the cardiac reserve and eventual decompensation, on account of mechanical embarrassment, stimulation of the heart rate by the abnormal secretion of the gland, or perhaps by the same etiological factor causing the hyperthyroidism. Tachycardia is present; all heart sounds are accentuated and snappy; functional murmurs are present; and the heart shows considerable enlargement. As the condition becomes worse, evidence of decompensation is present; and marked changes in the electrocardiographic tracing, particularly in the peaking of the T wave, are outstanding.

To summarize the cardinal points of our diagnosis of heart failure in middle life, we may review symptoms, physical findings, and laboratory findings:

(A) Symptoms.—

1. A sense of weakness, fatigue, and dyspnea.
2. Pain, either constant or severe, substernal in location; attacks lasting but a short time.
3. Digestive disturbance.
4. Cerebral symptoms, dizziness, inability to sleep, distressing dreams, throbbing in the head, and general irritability.
5. Attacks of palpitation.

(B) Physical Findings.—

1. Evidence of cardiac enlargement.
2. Changes in the peripheral vessels.
3. Alteration of blood pressure.
4. Murmurs with enlargement.
5. Irregularities.
6. Congestion about the base of the lungs and enlargement of the liver.

(C) Laboratory Findings.—

1. Definite alteration in the electrocardiographic tracings.
2. Specific alteration of the cardiac contour, as evidenced by x-ray findings.
3. Alteration of kidney function.
4. Decrease in cardiac reserve as determined by the exercise tolerance test.
5. Decrease in the vital capacity of the lungs.

7100 York Road

Diagnosis of Vascular Accidents with Special Reference to Cerebral Apoplexy and Coronary Occlusion

WILLIAM F. DAIBER, D.O.
Instructor in Diagnosis, Philadelphia College of Osteopathy

A vascular accident may be defined as any sudden interruption of circulation, most commonly by thrombosis, embolism, or rupture of a blood vessel. Theoretically, any part of the vascular system may be subject to such accidents, but actually we know that these catastrophes are usually arterial and, further, that certain arteries in certain viscera are most often affected. Cerebral apoplexy and coronary thrombosis lead the list of vascular accidents.

Arterial occlusions are frequently multiple. They may occur in either visceral or peripheral vessels and their recognition before death depends upon the production of symptoms.

It is probable that two factors operate in the production of arterial thromboses. The local factor is arterial atheroma which occurs in those vessels subjected to the greatest intravascular strain. This is probably the reason that atheroma of the left coronary is more common than of the right. However, there must be another factor—some strange constitutional tendency to intravascular clotting in certain people. This must be true, otherwise we cannot account for thrombosis occurring in young people with no atheroma present and also the lack of thrombosis in older people with a severe degree of atheroma.

CEREBRAL APOPLEXY

Here is an accident which threatens too great a percentage of individuals in middle life—a sequel to the failing heart of middle life which could well be titled, "and sudden coma."

The diagnostic features of this accident are important and should be discussed. However, of immeasurably greater importance is the recognition of the type of individual who may eventually suffer apoplexy. There undoubtedly exists a hereditary and familial tendency to cerebral hemorrhage. A so-called "apoplectic habitus" is observed in plethoric individuals, in thickset, short-necked persons who are prone to develop hypertension and cerebral arteriosclerosis. There is much clinical evidence that people living under emotional stress develop cerebral arteriosclerosis at an unusually early age.

Thus we have the individual with the apoplectic habitus who works too hard, plays too little, and worries too much. In addition to this he usually overeats of foods which are rich in cholesterin and spice. This is important because it is definitely known that excessive fat intake in this type of patient favors the development of arteriosclerosis. This patient often further adds insult to injury by continuous use of alcoholic beverages. However, even with all of these excesses there could still be a safety valve, in the form of play and exercise, which the patient usually fails to utilize.

To attempt to list all of the prodromal symptoms in the case of an apoplectic would mean a description of the many types of metabolic and infectious disorders which operate to produce atheromatous vascular changes and eventually the attack of apoplexy. Suffice it to say that we should be on guard for symptoms, signs, and laboratory indications of the various metabolic changes such as occur from faulty fat and carbohydrate metabolism in diabetes, and from urea, uric acid, sulphate and phosphate retention in cardiorenal disease; also from gout with its high uric acid and cholesterol content.

The symptoms of cardiovascular and neurologi-

cal lues should be remembered, since they may be the specific cause of an endarteritis. These cases often develop apoplexy before the age of forty.

However, there are symptoms, common to almost all cases, which arise from disturbance in cerebral circulation, vasomotor instability and decreased physical capacity. Upon questioning the patient, we note that he admits forgetfulness, decreased mental concentration, and transitory attacks of a feeling of fullness in the head with vertigo. In many cases these symptoms occur when the victims are in crowded street cars or elevators, or under any circumstance which is stimulating.

Insomnia is a common symptom. Headache, which tends to occur about 5:00 or 6:00 a. m. and to disappear several hours after the patient arises, is also common. Tinnitus aurium is apt to be noticed, especially when hypertension is present. Increasing dyspnea upon exertion may or may not occur, depending, of course, upon the presence of cardiac changes and hypertension. Patients with cardiorenal damage often have hypertension, or the reverse may be the case in many instances, since it is often difficult to determine whether the hypertension or the cardiorenal disease was the primary disorder. Decreased physical capacity and easy fatigability occur with dyspnea on slight exertion in this type of case.

Symptoms of vasomotor instability or irritability, fits of anger, and emotional imbalance are usually present when hypertension is present. Perhaps all these some day may be proved to be the result of hyperadrenalism.

There is usually a rise in both the systolic and diastolic blood pressures. The average systolic reading in these cases is from 185 to 210 mm. Hg. although many cases have systolic pressure of 250 or more. The diastolic pressure is of some prognostic value, the higher it is the more sure one can be of permanent vascular pathology. Thus a diastolic pressure of 130 mm. Hg. would not give the same promise of relief as one of 100 or even 110.

Of some aid in evaluating the degree of atheroma present is a routine we may refer to as a therapeutic test. It involves the recording of blood pressure before and after osteopathic manipulative treatment. Where there is a marked reduction of the systolic pressure (30 or 40 mm. Hg.) after the treatment, we may assume that a fair percentage of that hypertension is due to angiospasm. If little or no reduction occurs following treatment, we conversely assume that a more permanent arterial change has taken place. This is of value in the prognosis as well.

Associated renal disease will be missed in many cases if a urinalysis is the only test used for determining the renal status. It is a well-known fact that advanced renal disease may exist in patients with normal or nearly normal urinalyses. Mosenthal, Volhard and blood urea nitrogen tests are much more conclusive evidence of the degree of renal function.

Examination of the retinal arteries with the ophthalmoscope gives a good estimate of the condition of the vascular system.

There is another group of symptoms which we may class as the immediate prodromal warnings, or those symptoms immediately preceding the apoplectic attack—that is several hours or even twenty-four hours before an attack. The patient usually notices an exacerbation of all or any of those symptoms resulting from cerebral circulatory imbalance. These symptoms are severe headache, unusual vertigo and confusion, spots before the eyes, and anxiety.

DIAGNOSTIC FEATURES OF APOPLECTIC ATTACK

The actual apoplectic seizure may follow embolism, thrombosis, or rupture of a cerebral vessel. It is now generally believed that thrombosis due to pathologic changes in the cerebral vessels is the most common cause.

It is quite apparent that a diseased blood vessel under constantly increased pressure will reach its breaking point when extra pressure is applied by the further increase in demand from exertion or mental excitement. Thus one observes cerebral hemorrhage after sudden exertion, on straining at stool, severe coughing, vomiting, during childbirth and coitus. Intense emotion and mental shock, especially fright and anger, may be the immediate causes.

Most cases of cerebral apoplexy are ushered in by coma, the severity depending upon the extent of the hemorrhage. The patient lies quietly, the face is flushed, respirations are deep and slow with the cheeks blowing out on expiration, especially the cheek on the side of paralysis. Respiration is usually noisy due to the relaxation of the soft palate. Swallowing is usually impossible. The pulse is generally slow and full. The pupils are either normal or dilated, but do not react to light. The general musculature is flaccid and the superficial and deep reflexes are abolished. With the onset of the coma, there may be incontinence of urine. The temperature usually drops from shock, although slight increase may occur. Fever is apt to be high in the course of septic embolism. When the cause of the coma remains in doubt, the definite proof of an existent hemiplegic syndrome clinches the diagnosis. Very often there is conjugate deviation of the head and eyes to one side, the patient generally looking to the side of the hemorrhage and away from the side of paralysis. This is common in cortical lesions.

If the hemorrhage is not extensive and the patient does not die in coma, the stupor lessens, the reflexes reappear, the patient begins to move his limbs, so that one can determine which side is paralyzed, the pulse quickens and the temperature rises for a day or two.

In differentiating this coma from that due to other causes, it is of inestimable value to know the previous history of the patient.

CORONARY OCCLUSION

The heart is dependent upon two arteries for its blood supply—the right and left coronary. Obstruction of these is an event for which there can be little compensation by collateral circulation.

Symptoms of coronary disease may be produced in one of three ways:

1. By sudden obstruction from thrombosis or embolism.
2. By gradual narrowing of the lumen of the artery by endarteritis.
3. By vascular spasm.

The symptoms arising from closure of the coronaries depend upon the rapidity of the closure, the size of the vessel occluded, the state of the myocardium, and the potentialities of the collateral circulation.

That symptom group known as angina pectoris may arise from closure of the coronary by vascular spasm and pathologic narrowing of the coronary lumen as a result of sclerosis, endarteritis, and aortic disease. Acute obstruction from thrombosis gives rise to a similar syndrome which is much more permanent in its effect on cardiac capacity. This syndrome is called coronary thrombosis.

In coronary thrombosis, the patient is usually a man past 50 years of age, although an increasing incidence is now noted in the fifth decade of life. The type of patient is quite similar to the constitutional type described as the apoplectic habitus. The same physiopathologic mechanism obtains, the main difference being that the location of the lesion is in the coronary artery. Preceding attacks of substernal oppression may have occurred or the present attack may be the first ever experienced.

The patient is suddenly seized with an agonizing, unbearable pain in the chest. This pain comes on without the usual attributes of angina pectoris such as effort, gastric distention or mental anguish. On the contrary, an attack may occur when the patient is quiet or even when he is asleep.

The pain is of a crunching or tearing character, vise-like, and is located behind the upper, middle, or lower sternum. It may be most intense over the epigastrium or the precordium. It radiates to one or both arms, up the neck to the mandibles, and also may be felt in the upper back. Vomiting may occur. The face is ashen in color, anxious, and pinched. Beads of perspiration stand out on the forehead. Fear of impending death is written on the countenance. Dyspnea is usually present, the respiratory excursions being shallow and restricted. The pulse is rapid and weak, the blood pressure low, cardiac activity is greatly subdued, the apex beat being almost imperceptible. All heart sounds are distant and weak. Examination of the lungs usually reveals moist rales at the bases—evidence of pulmonary edema.

The temperature is usually subnormal at the onset, with fever of 100 to 102 F. soon following. With the advent of the fever, leukocytosis of 12,000 to 20,000 usually occurs. If the obstructed artery is the anterior or left coronary, as it most often is, a pericardial friction rub usually appears within several days.

The symptoms are not relieved by nitroglycerine and scarcely by morphine until large doses, ½ to ¾ grain, are administered.

LESS COMMON VASCULAR ACCIDENTS

Thrombosis of a mesenteric vessel occasionally occurs and when it does, presents quite as acute a picture as the first two accidents mentioned. This condition may be a terminal state of cardiac or arterial disease and as well may arise from abdominal infection. These patients suffer acute abdominal pain, usually generalized, rapid weak pulse, exhaustion—a syndrome very similar to intestinal obstruction. Gangrene of the area of intestine supplied by the thrombosed vessel follows and the prognosis is always poor.

THROMBOSES IN PERIPHERAL VESSELS

Thromboses may occur in peripheral as well as visceral arteries. This is demonstrated in Buerger's disease where the vessels of the lower extremities are involved.

THROMBOSES OF RETINAL ARTERIES

Thromboses of the retinal arteries sometimes occur and cause varying degrees of impaired vision or even complete blindness on the side affected. If only a small branch be occluded, moderate diminution of vision will follow. The onset is usually sudden.

EMBOLISM

Cardiovascular accidents due to embolism are much less frequent than those due to thromboses, but they are more fatal. Emboli may be portions of thrombi swept into the circulation from atheromatous patches in the aorta, from the larger veins of the pelvis and lower extremities, or from thrombi within the heart. A large embolus may cause sudden death by occluding one of the main branches of the pulmonary artery, one of the coronary arteries or a large cerebral blood vessel. Emboli coming from the left heart or aorta most frequently lodge in the spleen, kidneys, or brain. Emboli derived from the general venous circulation are usually carried through the right heart to the lungs where they occlude branches of the pulmonary artery. Such accidents not infrequently occur after surgical operations on the lower abdomen, pelvis, or thighs, and are often referred to as pulmonary apoplexy, the onset of which is characterized by sudden severe dyspnea, acute severe right-sided chest pain, grayish pallor, and frequently sudden death. This syndrome almost parallels that of coronary thrombosis and usually comes on after some exertion, even though the effort be slight. This picture is one of acute right heart failure with dilatation from pulmonary obstruction.

FAT EMBOLISM

The possibility of a fat embolism following fracture of long bones, and also following surgery in obese individuals, should always be kept in mind. This type of embolus may, and often does, lodge in a branch of the pulmonary artery and result in the syndrome of pulmonary apoplexy as just described.

CEREBRAL EMBOLISM

Cerebral embolism most often occurs in young people although no age is exempt. The emboli are generally derived from vegetations on the valves of the heart, especially from mitral stenosis and from atrial thrombosis in auricular fibrillation. The symptoms produced were discussed under cerebral apoplexy.

RUPTURED BLOOD VESSELS

Vascular accident by rupture of a blood vessel is exemplified almost solely by cerebral apoplexy.

Rupture of an aneurism is one of the more rare accidents, which is practically always fatal in a very

short time due to the rapid, massive hemorrhage.

VASCULAR SPASM

Another type of vascular accident which is not accompanied or followed by permanent tissue changes is vascular spasm. While this phenomenon can probably never be proved, it is the only logical explanation for transitory hemiplegias which last only several hours—and again for many of those cases of angina pectoris where no pathology is demonstrable at autopsy.

5007 Frankford Ave.

REFERENCES

Cecil, R. L.: A Textbook of Medicine. Ed. 3. W. B. Saunders Co., Philadelphia, 1933.

DaCosta, J. C.: Modern Surgery. Ed. 9. W. B. Saunders Co., Philadelphia, 1925.

Hyman, Albert S. and Parsonnet, Aaron E.: The Failing Heart of Middle Life. F. A. Davis Co., Philadelphia, 1932, pp. 137-159.

Lewis, Thomas: Diseases of the Heart. The Macmillan Co., New York, 1933, pp. 41-49.

May, Charles H.: Diseases of the Eye. Ed. 14. William Wood and Co., Baltimore, 1935, pp. 290-294.

Wechsler, Israel S.: A Textbook of Clinical Neurology. W. B. Saunders Co., Philadelphia, 1935, pp. 343-363.

Roentgenologic and Electrocardiographic Diagnosis*

PAUL T. LLOYD, D.O., M.Sc. (Ost.) and RALPH L. FISCHER, D.O., M.Sc. (Ost.)
Philadelphia College of Osteopathy

Dr. Lloyd: As a field of diagnostic endeavor, roentgenographic examination of the heart and aorta has for the greater part been neglected, in spite of the fact that aside from the autopsy table it offers the only available means of visualizing the heart and great vessel structures.

A properly conducted roentgen ray examination will reveal much pertaining to cardiac anatomy, physiology, and pathology. To accomplish this, a painstaking and careful routine is necessary, with flexibility of routine provided to suit the individual case.

Both screen and film procedures are to be employed, with the screen examination preceding filming. Under the fluoroscope the heart is studied from the standpoint of physiologic activity. The cardiac rate and rhythm are recorded, muscular amplitude of the various chambers and of the heart generally is observed, and the behavior of the heart during normal breathing and at suspended inspiration and expiration is estimated. The aorta is examined for aneurysm, exaggerated pulsatility, and anatomic variations. During this procedure, the patient is examined in the anterior, lateral, and right and left oblique positions.

The screen findings serve as a guide for subsequent film examination. Routinely, however, it is our practice to obtain films in the anterior and left anterior oblique positions with such other films being made as the case demands. (Figs. 1 and 2) All films are exposed at a film tube distance of 2 meters and not only serve to demonstrate structural cardiac changes, but as well constitute a permanent record of the cardioaortic characteristics presented by the patient at the time of the examination.

In the normal anterior film there is shown a small portion of the left auricle with the left ventricle forming the major left cardiac convexity. The right auricle composes the right cardiac silhouette with the right ventricular margin obscured by the diaphragm. The aorta forms a part of the central chest

*Thirty-three illustrations of x-ray films and cardiograms were furnished with this paper. Lack of space has prevented publication of all of them. Those used are representative of common heart conditions.—Editor.

Fig. 1

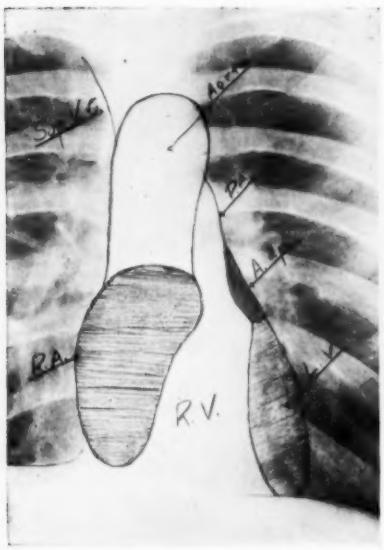

Fig. 2

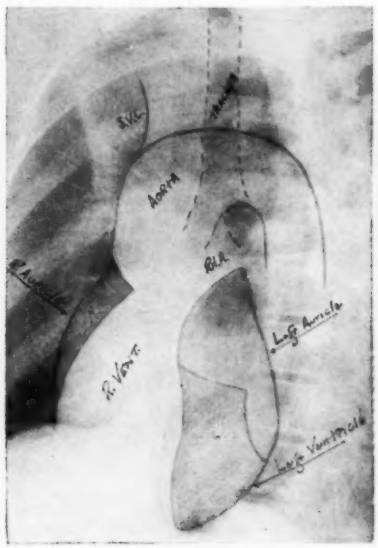

Fig. 1.—Normal anterior film (retouched) of heart, showing location of cardiac chambers as observed in this picture. Fig. 2.—Normal left anterior oblique film (retouched). The value of the left oblique study may be estimated by observing those portions of the cardiac structure composing the silhouette. The aorta is well demonstrated.

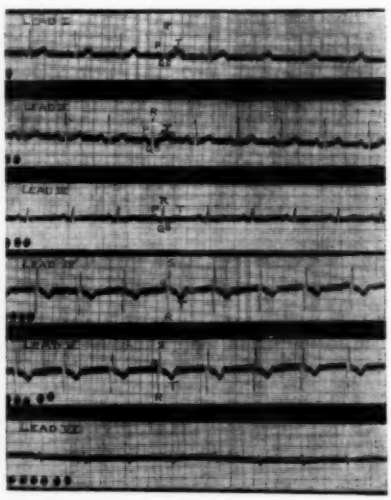

Fig. 3.—Normal leads of the electrocardiogram. Leads I, II, and III are standard, and IV, V, and VI precordial.

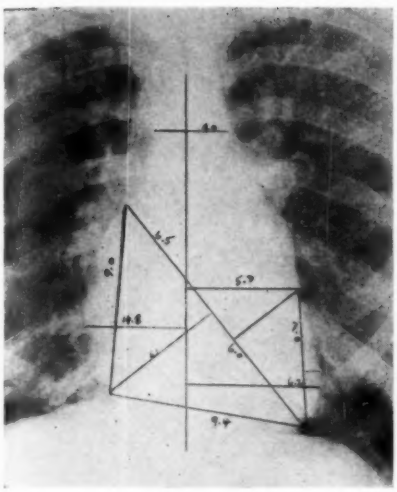

Fig. 4a

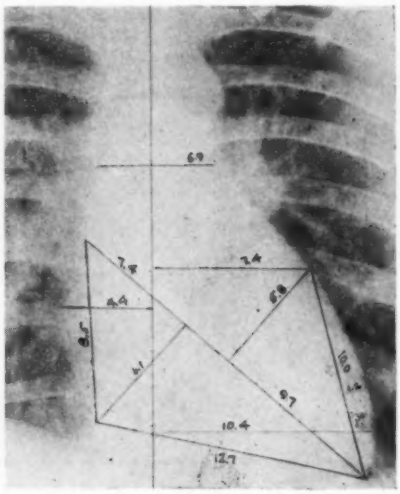

Fig. 5a

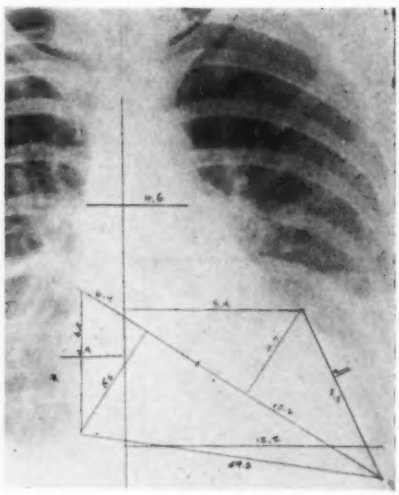

Fig. 6a

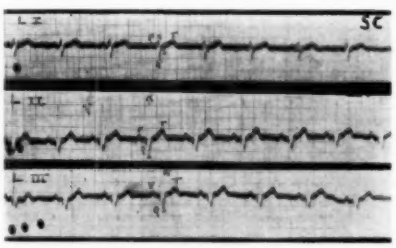

Fig. 4
Mitral stenosis—Class I.

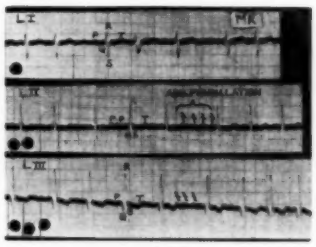

Fig. 5
Mitral insufficient with failure—Class IIb.

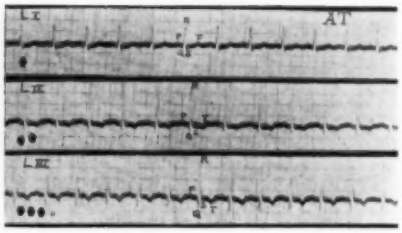

Fig. 6
Aortic stenosis with failure—Class IIa.

opacity with the arch of the vessel usually presenting itself as a convex bulge or knob on the left side. Between the aortic convexity and the left auricle is a second prominence caused by the pulmonary artery.

Lines and diameters are constructed on the anterior film which demonstrate with more than fair accuracy the size of the cardiac chambers. It seems advisable here to mention briefly some of these diameters and their significance. Lines drawn from the central midline to the maximum right and left cardiac margins are known as the median right and left diameters. The right and left oblique diameters are constructed to the longitudinal diameter and the distance between bisected. Dividing the upper or auricular portion by the lower or ventricular portion establishes the auriculoventricular quotient or ratio, which is an indicator as to existing auricular or ventricular preponderance. The left ventricular diameter extends from the apex to the left auriculoventricular junction and a perpendicular constructed to it at the site of maximum salience of the left ventricular curve gives a bisector equivalent to the thickness of the left ventricular myocardium. The bisector is normally 8 to 10 millimeters, being increased in hypertrophy, and diminished in myocardial disease and in coronary disease where no pre-existing hypertrophy is present. Dividing the transthoracic diameter by the sum total of the median right and left cardiac diameters, a quotient or ratio is obtained which aids in determining gross or general cardiac enlargement.

It may be briefly stated that enlargement of any part of the heart usually occurs proximal to the site of lesion; enlargement of the left auricle occurs in mitral stenosis and the right heart is most often involved in lesions of the mitral valve. The left ventricle becomes enlarged in aortic disease, heart block, chronic hypertension, and as well in mitral insufficiency.

To facilitate the presentation of cardiographic and roentgen ray findings applicable to the subject under discussion, case abstracts have been prepared to demonstrate typical cases of heart failure in middle life.

Dr. Fischer: The electrocardiogram comprises the record of the electrical energy given from the body of the heart during each systole and diastole. Electrodes are placed on the surface of the body to receive and transmit, over wires, the varying potentialities of this energy. We use six leads, the first three standard, and the latter group precordial, which are derived from electrodes on the anterior and posterior chest walls.

The normal graph for each of the first three leads is essentially the same (Fig. 3). The P wave represents auricular excitation and contraction; it is low, and narrow, and directed upward. The QRS complex (ventricular excitation) is a fine line, the highest and narrowest of all, and the major portion of it is positive, or upward. The T wave, (ventricular completion) is also positive, and its summit is angular. The ascending limb of T is longer than the descending.

The normal precordial leads, (IV, V, VI) are characterized by the absence of the P wave, the great

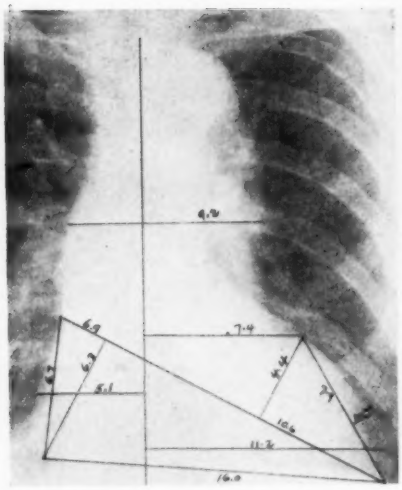

Fig. 7a

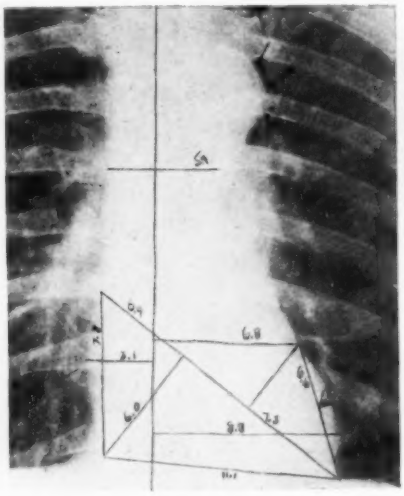

Fig. 8a

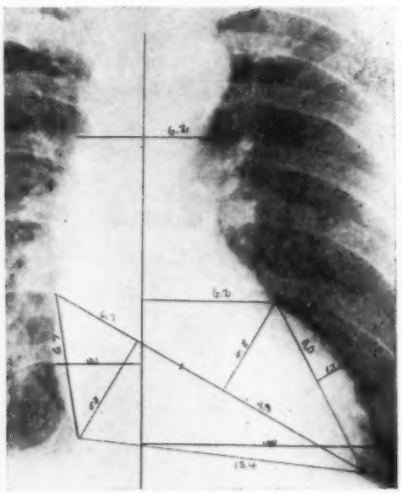

Fig. 9a

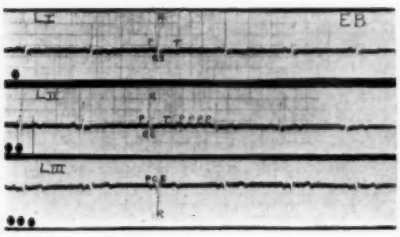

Fig. 7

Aortitis with left ventricular failure—Class III.

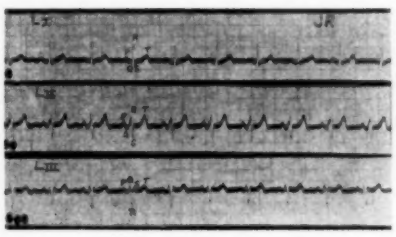

Fig. 8

Aortic sclerosis (syphilitic)—Class IIb.

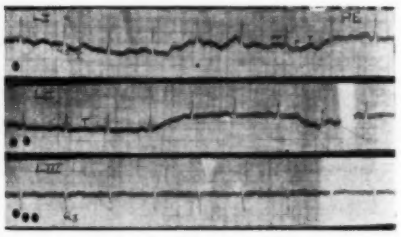

Fig. 9

Coronary occlusion—Class IIb.

height or amplitude of QRS, and the inversion or negativity of T.

The first case we report is that of S. C., female, white, and married. Her chief complaint was upper precordial pain, dyspnea, and fatigue. Personal and family histories were negative. Pulse 68, respiration 28, blood pressure systolic 112, diastolic 68. Blood count normal, slightly increased rate of blood sedimentation (14 mm. in 60 minutes); albuminuria. Diastolic apical murmur was present.

Electrocardiographic diagnosis (Fig 4): Inversion of QRS in Lead I—right ventricular preponderance—mitral disease. Final diagnosis: Mitral stenosis—Class I.

Dr. Lloyd: Screen examination of patient S. C.: Tachycardia with variation in rhythm. Exaggerated conus pulsatility. Film findings (Fig. 4a): Enlarged auricular shadows, small left ventricle, small aorta. The heart is not generally enlarged. Cardiothoracic quotient: 2, normal limit. Auriculoventricular quotient: 0.907, auricular preponderance.

Dr. Fischer: Patient M. K., female, white, and married. Chief complaints were dyspnea of three years duration and persistent cough. Objective examination revealed pitting ankle edema and cyanosis of the lips and nails, pulse 96 and irregular, respiration 40. Crepitant rales equally distributed in both hilar and basal areas of the lungs. Systolic soft mitral murmur transmitted to the left axilla and inferior angle of the left scapula. Blood count negative; albuminuria. Electrocardiographic diagnosis (Fig. 5): Inverted QRS in Lead I. Slurred QRS throughout all leads—mitral disease, auricular fibrillation, and myocardial degeneration. Final diagnosis: Mitral insufficiency with failure—Class IIb.

Dr. Lloyd: Patient M. K. Screen examination: Tachycardia with fibrillation evident. Film findings (Fig. 5a): Prominent and enlarged left auricle. Left ventricle enlarged and hypertrophied. Mitral characteristics prevail. Cardiothoracic quotient: 1.8. Auriculoventricular quotient: 0.762.

Dr. Fischer: Patient A. T., female, white, and married. She exhibited physical signs of cardiac disease but no symptoms, when she entered the obstetrical clinic. Her previous history revealed chorea at 9 years of age. Family history negative. Her radial pulse filled slowly and was of the plateau type. A systolic thrill was felt and a harsh systolic murmur heard at the aortic area, which murmur was transmitted to the carotids and along the second right intercostal space. Blood Wassermann 4+; albuminuria. Electrocardiographic diagnosis (Fig. 6): Diphasic T in Lead II, inverted T in Lead III, and slight slurring of the QRS throughout—myocardial degeneration. Final diagnosis: Aortic stenosis with failure—Class IIa.

Dr. Lloyd: Patient A. T. Screen examination: Bradycardia prevailed at screening, and the left ventricular contractions were vigorous and forceful. Film findings: (Fig. 6a) Heart enlarged, prominent left ventricle, increased bisector value, left auricle dilated. The aortic shadow is not widened. Cardiothoracic quotient: 1.6. Auriculoventricular quotient: 0.512—ventricular preponderance.

Dr. Fischer: Patient E. B., male, aged 66 years. We had observed this patient for eight years. He originally complained of dyspepsia and precordial soreness; both of these are now absent, but he is pallid and cyanotic. His pulse is 56, blood pressure, systolic 140, diastolic 90, and the aortic second sound is short and sharp (bruit de tabourka). Family history of hypertensive disease and angina pectoris. Wassermann is negative as are the blood count and urinalysis. Electrocardiographic diagnosis (Fig 7): Bradycardia, inverted QRS in Lead III — left ventricular preponderance, aortic disease. T waves throughout are abnormal—myocardial degeneration. Multiple P waves—auricular overactivity. Final diagnosis: Aortitis with left ventricular failure—Class III.

Dr. Lloyd: Patient E. B. Screen examination: Bradycardia, rhythm satisfactory, amplitude diminished. Film findings (Fig. 7a): Aorta markedly widened and increased pulsatility—left ventricular preponderance. Heart enlarged. Cardiothoracic quotient: 1.6. Auriculoventricular quotient: 0.650.

Dr. Fischer: Patient J. R., male, aged 50 years, white. His chief complaint was general weakness especially of the legs while walking and it was of two months' duration. There was a family history of cardiorenal disease. His pulse was regular and full, 84 a minute, and his blood pressure was systolic 220, diastolic 140. His blood was anemic and the Wassermann was positive, 4+. Blood urea nitrogen 53 mg. per 100 cc. Electrocardiographic diagnosis (Fig. 8): Inverted QRS in Lead III—left ventricular preponderance, aortic disease. Slurred QRS and abnormal T in all leads—myocardial degeneration. Final diagnosis: Aortic sclerosis (syphilitic)—Class IIb.

Dr. Lloyd: Patient J. R. Screen examination: Rate and rhythm within normal limits, amplitude increased, aortic pulsatility exaggerated in the ascending limb. Left aortic convexity prominent and the aorta generally increased in density. Film findings (Fig. 8a): Heart not enlarged, bisector valve decreased. Calcified plaques in the aortic arch.

Dr. Fischer: Patient P. E., male, white, married, aged 62 years. Two years prior to this examination he suddenly lost consciousness for about a minute following which he was extremely weak. Similar attacks have occurred twice since the original one. His pulse was 88 with other signs inconsequential. Laboratory reports essentially negative. Electrocardiographic diagnosis (Fig. 9): Low ST "take-off" and cove T in Lead I. T of low amplitude in lead II. Deep Q in III. Low ST "take-off" in leads IV and V. Deep Q in VI. Final diagnosis: Coronary occlusion—Class IIb.

Dr. Lloyd: Patient P. E. Screen examination: Tachycardia with altered rhythm, muscular amplitude diminished (left ventricle). Aortic density increased. Film findings (Fig. 9a): Heart enlarged, ventricular bisector 1.7 cm. (left ventricular hypertrophy). Sclerotic plaque in aortic arch.

48th and Spruce Streets.

Some Principles Underlying Osteopathic Procedures

FREDERICK A. LONG, D.O., M.Sc. (Ost.)
Professor of Principles of Osteopathy and Director of Research
Philadelphia College of Osteopathy

Heart failure means the failure of the heart muscle to maintain adequate circulation. The success of mechanical and manipulative measures in the treatment of this condition would seem to rest primarily upon the ability of such measures to arrest the course of myocardial weakening by maintaining adequate nutrition and tone in the heart muscle. In addition to such direct effect upon the heart, manipulative procedures may be instituted to effect changes in certain extracardiac conditions which might adversely affect the heart. This paper, however, will be limited to the problems of myocardial nutrition.

In the osteopathic approach to myocardial nutrition, the major problem involves the mechanisms and processes through which various structural and mechanical factors might operate to embarrass coronary blood flow, and through which manipulative treatment and improvement in body mechanics operate to enhance coronary circulation. These mechanisms and processes function primarily through the control of the coronary arteries.

The coronary blood vessels receive the richest nerve supply of any arteries in the body[1]. Pathways are provided for sympathetic, parasympathetic, and visceral afferent impulses. The sympathetic ganglion cells are located in the stellate and cervical sympathetic ganglia, receiving preganglionic connector fibers from the intermediolateral cell groups in the upper thoracic levels of the gray substance of the cord. These connectors enter the sympathetic system over white rami communicantes associated with the upper five or six thoracic spinal nerves[2]. The visceral efferent neurons in the upper thoracic cord can be affected by impulses from higher centers, or from the cervical and upper thoracic somatic reflex zones. The parasympathetic supply to the coronary arteries comes from intrinsic ganglion cells within the heart, these cells in turn receiving connector fibers from nerve cell bodies located in the dorsal efferent nucleus of the vagus nerve. The visceral efferent fibers travel chiefly with the sympathetics from the stellate ganglion.

Some question has existed concerning the effectiveness of coronary vasomotor control, but Carter[3] cites the work of Anrep and Segall (1923) as indicating that there is an effective vasomotor mechanism in which the parasympathetic vagus impulses maintain a state of vasoconstrictor tone and the sympathetic impulses act as vasodilators. These investigators further showed that increase in cardiac output results in increased coronary flow through reflex diminution in the tonic effect of vagus impulses.

Blood flow through the coronaries may be altered by other factors. Increased heart rate increases

coronary flow until a rate of 200 beats a minute is reached. Increase in diastolic pressure greatly increases coronary flow while increase in systolic pressure does so only moderately[1]. The last consideration is of importance for it indicates the possible danger to the myocardium of greatly reducing the diastolic blood pressure.

The data available relating to the manner in which structural and mechanical factors, including the spinal lesion, operate to affect coronary circulation adversely are not extensive at present, but would indicate that analysis of the relationship should include such states as posture, body mechanics, and the vertebral lesion. A large part of the effects of these conditions is exercised through the vasomotor mechanism, and it is through this mechanism that the effects of lesion and of manipulative treatment must largely be explained.

Goldthwait[4] and others have emphasized the importance of good posture and body mechanics in maintaining normal circulation, and they particularly stress the importance of normal diaphragmatic action in aiding the return of blood to the right heart. It is conceivable that postural alterations might produce variations between the coronaries and the aorta that would result in some diminution in coronary flow. If, as Moschcowitz[5] holds, arteriosclerosis is due in large part at least to mechanical causes and is most prominent in the portion of the artery where the stress is greatest, as at bifurcations, then it might well be that the points of mechanical stress between the coronaries and aorta occasioned by postural changes would be rendered more susceptible to arteriosclerotic change. Postural and mechanical abnormalities cannot be divorced from a consideration of the spinal lesion and they become important considerations in osteopathic approaches to therapy.

Any analysis of the spinal lesion in relation to myocardial failure must include the manner in which the lesion might decrease the nutrition to the heart muscle and thus predispose to insufficiency, and as well an explanation of the effects of its removal.

To attempt to define the spinal lesion is a difficult, if not impossible, task in the light of present knowledge. It may be described, however, as essentially the reaction of inflammation on the part of paravertebral tissues to some traumatic mechanical element accompanied by abnormal joint mechanics, abnormal tissue stresses, and in some instances actual subluxation. The view of an allopathic writer on this point is interesting. Coulter[6] says that manipulation is used in four classes of cases: "(1) reduction of dislocation, (2) forcible breaking down of adhesions, (3) soft tissue manipulation and (4) manipulations of joints in which no actual dislocation has occurred, but where there is a slight defect of a character difficult to describe." Fortunately, we are not so much in the dark about this fourth class, for the osteopathic school has studied and learned much about this thing that the nonosteopathic writer finds so "difficult to describe." The dominant changes which have been found to result from the experimentally produced spinal lesion in laboratory animals include disturbed water balance (edema) and altered chemistry (acidosis). In explaining the place of the lesion in coronary alterations, it becomes necessary to discuss not only those lesion changes, but as well the reflex mechanisms probably associated with their induction.

Until studies appear showing more conclusively that there is a relatively direct association between spinal lesions and the vagal nerve center, it must be assumed that the effects of lesion are produced largely through the sympathetic division of the vegetative nervous system. The laws concerning the distribution of impulses entering the cord, and the recognized fact that the body reacts to harmful influences largely through the sympathetics and not the parasympathetics, lend support to such assumption.

The cervical or upper thoracic spinal lesion cannot decrease coronary flow by a simple process of sympathetic overstimulation, for such stimulation would induce coronary dilatation with increased flow rather than constriction with decreased flow. The lesion must decrease coronary flow, then, by depressing the outflow of sympathetic vasodilator impulses in some manner, thus disturbing the delicate adaptive balance between sympathetics and parasympathetics. Several theories suggest themselves in explaining such depression.

Under the circumstances of normal physiological activity, impulses from the somatic zones are prevented by graded synaptic resistance from overflowing into vegetative levels to a degree greater than necessary to consummate certain vegetative reflexes involving somatic structures, such as those governing vasomotion. There are evidences, however, that under abnormal circumstances synaptic barriers are crossed and overflow does take place. The visceromotor reflex and the viscerosensory phenomenon are examples of this process. In the presence of abnormal joint mechanics with tissue alterations, impulses could arise in altered somatic spinal tissues sufficiently summated to cross to the intermediolateral neurons and thus reach the vegetative level. If the rate of discharge of these impulses were such that a central inhibitory state involving the outflow of vasodilator sympathetic impulses became established, the vasodilator effect of the sympathetics to the coronaries would be decreased. The vasoconstrictor influence of the vagus impulses would then be relatively overactive with varying degrees of coronary caliber decrease resulting.

Nerve fibers are not easily fatigued. The nerve cell body and the synapse are, on the other hand, susceptible to fatigue and chemical disturbance in their environment. The nerve fiber responds in an "all or none" fashion, that is, if it responds at all to a stimulus it will be to its maximum capacity to do so. This capacity, however, depends upon the nutritional state of the conducting fiber. Any factor, therefore, which could alter nutrition to, or fatigue the nerve cell body of, a neuron would reduce its ability to transmit impulses, i. e., reduce its maximum capacity. Burns[7] describes the cord cell changes nearest the experimental lesion as follows: "Nerve cells in the spinal segments nearest the lesioned vertebrae show the changes already described by various authors for the fatigued or mildly poisoned nerve cell." This would indicate that in the lesion there are circumstances altering the normal metabolism in the cord cells, and if the cells affected included the visceral efferent coronary vasodilator sympathetic connectors, it could be assumed that their maximum conduction capacity would be reduced with resultant depressed activity of vasodilator influence.

In addition to the above stated condition of de-

pressed fiber conduction capacity, there is also to be considered the effects of synaptic alterations. In the presence of oxygen deprivation and factors producing fatigue, the synaptic levels of central connectors will be increased[8]. Increased synaptic resistance involving the coronary dilator sympathetic connectors would depress sympathetic outflow and allow the tonic vagus impulses relatively to overact. Thus, the conditions found to exist in the laboratory animal would suggest that a combination of the effects of decreased neuron conductivity and increased synaptic resistance could well account for any coronary narrowing that might rest upon a reflex basis.

This speaker has elsewhere[9] expressed the belief that local and remote changes in the lesion are probably reflexly produced concomitantly. This would suggest that most of the local and remote effects of the lesion are reflex, the origin being in spinal tissues forced to operate in the presence of some mechanical embarrassment. Structural alteration would seem to be of importance directly as it can produce mechanical disturbance. Complete fixation in an abnormal position probably does not produce as much harm as altered mechanics with motion does. Long and Lloyd [10, 11] have found no complete fixation determined radiographically in cervical lesions thus far analyzed. It would seem from what has been said that the removal of the initiating factor of abnormal joint mechanics in the vertebral column would be the major objective in manipulation. This assumption has received experimental substantiation, for Burns[12] has shown that it was not until normal articular motion had been returned to the spinal segments of lesioned animals that pathologic results disappeared. It may well be assumed, then, that the disturbing effects upon coronary circulations induced by the spinal lesion would be removed with the restoration of normal arthrodial movement in the spinal joints. Such restoration might include the correction of posture and body mechanics, as well as the correction of the spinal lesion. The results to be expected from manipulative measures which depend for their effect upon reflex mechanisms will be determined in large part by the pathological changes in the tissues of these mechanisms, but the manipulative approach has more to offer than any other, even in the presence of advanced pathology.

1332 Real Estate Trust Bldg.

REFERENCES

1. Sutton, D. C. and Lueth, Harold: Diseases of the Coronary Arteries. The C. V. Mosby Co., St. Louis, 1932.
2. Pottenger, F. M.: Symptoms of Visceral Disease. Ed. 4. The C. V. Mosby Co., St. Louis, 1930.
3. Carter, E. P.: The Circulation of the Blood. Physiology in Modern Medicine by J. J. R. Macleod. Ed. 7. The C. V. Mosby Co., St. Louis, 1935.
4. Goldthwait, J. E. et al.: Body Mechanics. J. B. Lippincott Co., Philadelphia, 1934.
5. Moschcowitz, Eli: Arteriosclerosis. The Cyclopedia of Medicine. Edited by George Morris Piersol. F. A. Davis Co., Philadelphia, 1933, 3:211-222.
6. Coulter, J. S.: Physical Therapy. Review of Medical Progress. F. A. Davis Co., Philadelphia, 1935.
7. Burns, Louisa: Effects of Vertebral Lesions on Cell Structure. Jour. Am. Osteo Assn., 1926 (Oct.) 26:97-101.
8. Bard, P.: The Neuromuscular System. Physiology in Modern Medicine by J. J. R. Macleod. Ed. 7. The C. V. Mosby Co., St. Louis, 1935.
9. Long, F. A.: A Survey of Some of the Mechanisms and Processes Through Which Abnormal Spinal Mechanics Can Produce Local and Remote Effects. Scientific Supplement of Osteopathic Digest, 1936 (May) No. 6.
10. Long, F. A. and Lloyd, P. T.: The Use of the Roentgen Ray in the Study of Vertebral Mechanics with Special Reference to its Adaptability in Osteopathic Procedure. Scientific Supplement of Osteopathic Digest, 1935 (Nov.-Dec.) No. 3.
11. Long, F. A. and Lloyd, P. T.: Unpublished material.
12. Burns, Louisa: Review of the Pathology of the Lesion and Evidences of its Possible Correction. Jour. Am. Osteo. Assn., 1934 (Apr.) 33:338-340.

Osteopathic Treatment of the Heart Failures of Middle Life

C. HADDON SODEN, D.O.
Professor of Osteopathic Technic
Philadelphia College of Osteopathy

Space limitations for this symposium do not permit us to describe the various conditions of the body framework that are met with in heart disease. Congenital anomalies of the vertebral column, postural faults, changes in the thoracic cage, and many other structural abnormalities and alterations must be considered before outlining treatment. The age and type of patient also are determining factors in the management of the case.

Osteopathic treatment necessarily includes instruction to the patient regarding rest, diet, and properly graded exercises; and the use of surgery, when necessary, diathermy, and passive or active manipulation. It is the purpose of this paper to outline some of the methods of correcting articular lesions of the upper, middle, and lower cervical vertebrae, the upper four thoracic vertebrae, and the corresponding ribs and paravertebral structures.

LESIONS OF THE OCCIPITO-ATLANTOID ARTICULATION

Normal physiological articular motion.—(a) Lateroflexion (side-bending); *(b)* Bilateral flexion (forward bending); *(c)* Bilateral extension (backward bending).

*Type of Lesion.**—Lateroflexion (side-bending) to the right side.

Diagnosis.—The right transverse process of the atlas is high in the angle formed by the mastoid process of the right temporal bone and the ramus of the mandible, while the left transverse process is low in the corresponding angle. Therefore, the right occipital condyle is downward and medialward on the right superior articular facet of the atlas, and the left occipital condyle is lateralward and upward. In lateroflexing to the left side, the transverse processes are not felt to change their positions.

Normalization (Method No. 1).—

(a) Position: The patient is supine. The physician stands to the left side of the patient's head, and places his right hand lateral to the patient's right temporal bone, while the left index finger is placed lateral to the mastoid process of the left temporal bone.

(b) Movements: The patient's head is lateroflexed to the left and maintained in this position for some seconds. Then a mild thrust or steady pressure by the physician's left index finger causes the left occipital condyle to glide downward and medialward, while the right condyle glides upward and lateralward.

(c) Test for motion: On palpating the transverse processes of the atlas, they are found to be in normal position and will lateroflex to either side; they are felt to move and to change their positions in relation to the angles.

Method No. 2: The type of lesion is the same as in Method No. 1. The patient is sitting on a stool.

(a) Position: The physician stands behind and to the right of the patient. He passes his right

*For purposes of describing technic, an arbitrary lesion is chosen in this and the following descriptions. These lesions are not necessarily present in all heart disease cases, but they are typical.

hand in front of the patient's neck, and places his right index finger lateral to the mastoid process of the left temporal bone, while the left hand is placed lateral to the right temporal bone.

(b) Movements: The patient's head is lateroflexed to the left. Traction is maintained by pressing lateralward with the left hand, while pressing medialward with the right index finger. A mild thrust by the right index finger while maintaining lateral tension with the left hand causes the left occipital condyle to glide downward and medialward, while the right condyle glides upward and lateralward.

(c) Test for normal motion as in Method No. 1.

Type of lesion.—Bilateral flexion (forward bending).

Diagnosis.—The transverse processes of the atlas are approximating the rami of the mandible. Therefore, the occipital condyles have glided downward and backward on the superior articular facets of the atlas. Upon bilateral extension (backward bending), the transverse processes do not change their positions.

Normalization.—

(a) Position: The patient is supine. The physician stands at the head of the table. He grasps the patient's occipital bone between the left thumb and index finger, and places his right hand on the patient's frontal bone.

(b) Movements: The head is extended bilaterally and maintained in this position. With a rocking motion, the left thumb and index finger exert a forward, upward pressure, while the right hand presses backward and downward. This causes the condyles to glide forward and upward.

(c) Test for normal motion as in Method No. 1.

Type of lesion.—Bilateral extension (backward bending).

Diagnosis.—The transverse processes of the atlas are approximating the mastoid processes of the temporal bones. Therefore, the occipital condyles have glided forward and upward upon the superior articular facets of the atlas. Upon bilateral flexion (forward bending), the transverse processes do not change their positions.

Normalization.—

(a) Position: The same as for bilateral flexion lesion.

(b) Movements: The head is flexed bilaterally and maintained in this position for some seconds. Then the right hand presses the head forward and downward, while the left hand presses backward and upward on the occipital bone.

(c) Test for normal motion as in Method No. 1.

LESIONS OF THE ATLANTO-AXIAL ARTICULATION

Normal physiological articular motion.—Rotation (chiefly).

Type of lesion.—Restriction of rotation of the atlas on the axis to the right side.

Diagnosis.—The right transverse process of the atlas approximates the mastoid process of the right temporal bone and is separated from the ramus of the mandible on that side. The reverse is true on the left side. Upon rotation of the atlas to the left side, the transverse processes are not felt to change their positions.

Normalization (Method No. 1).—

(a) Position: The patient is supine. The physician stands to the right side of the patient's head. He places his right index finger lateral to the tips of the right transverse process of the atlas and his left hand lateral to the left temporal bone.

(b) Movements: The operator rotates the patient's head and atlas to the left side and maintains rotation traction for some seconds. A thrust is then given by the right index finger or rotation is exaggerated by applying and maintaining backward pressure with the left hand and forward or medial pressure with the right hand.

(c) Test for normal motion.

Method No. 2: The type of lesion is the same.

(a) Position: The patient is sitting. The physician stands behind and to the left side of the patient. He passes his left hand in front of the patient's neck and the left index finger lateral to the tip of the right transverse process of the atlas, while the right hand is placed lateral to the left temporal bone.

(b) Movements: The operator rotates the patient's head and atlas to the left and maintains traction. A thrust or steady pressure is given by the left index finger while rotation traction is maintained with the right hand.

(c) Test for normal motion.

ARTICULAR LESIONS OF THE MIDDLE AND LOWER CERVICAL VERTEBRAE

The same methods of correction for occipito-atlantoid articular lesions can be used in this region, the only difference being that the left thumb and index finger are placed posterior to the inferior facets in bilateral lesions, and the index finger lateral to the inferior facet of the lesioned vertebra (convex side) in lateroflexion lesions; or methods of correction for atlanto-axial lesions can be applied, the only difference being that the index finger is placed lateral to the transverse process and posterior to the inferior facet of the lesioned vertebra on the side to which rotation takes place.

LESIONS OF THE UPPER FOUR THORACIC VERTEBRAL ARTICULATIONS

Normal physiological articular motion.—*(a)* Lateroflexion (side-bending); *(b)* Rotation; *(c)* Bilateral flexion (forward bending); and *(d)* Bilateral extension (backward bending).

Type of lesion.—Lateroflexion to the right side.

Diagnosis.—The spinous process deviates to the left, the right inferior facet of the vertebra above approximates the right superior facet of the vertebra below, while the left inferior facet separates from the left superior facet. Upon lateroflexion to the left side, the spinous process is restricted, or is not felt to move.

Normalization.—

(a) Position: The patient lies on his right side (concave side). The physician faces the patient. He places his left hand lateral to the patient's right temporal bone, while the right thumb is placed lateral to

the left side of the spinous process of the lesioned vertebra.

(b) Movements: The head and cervical column are lateroflexed to the left and upward traction maintained for some seconds. An upward thrust is made, using the head and cervical column as a lever. This causes the right inferior facet to glide upward while the left inferior facet glides downward.

(c) Test for motion.

Type of lesion.—Rotation of the vertebra to the left side.

Diagnosis.—The spinous process has deviated to the right side; the left transverse process is more prominent posteriorly than the right.

Normalization.—

(a) Position: The physician and the patient are in the same positions as for correcting lateroflexion lesions.

(b) Movements: The patient's head and cervical column are lateroflexed to the left side, rotated to the right side, and slightly extended. All three physiological moves must be maintained. A slight upward thrust causes motion.

(c) Test for motion: The spinous process will be felt to move and the transverse processes are apparently in normal relation with the transverse processes of the vertebrae above and below.

Type of lesion.—Bilateral flexion (forward bending).

Diagnosis.—The spinous process of the lesioned vertebra is separated from the one below it, and the inferior facets of the lesioned vertebra have glided upward on the superior facets of the vertebra below. Upon backward bending or extension, the spinous process is not felt to change its position or it is restricted in its motion.

Normalization.—

(a) Position: The patient is sitting. The physician is standing behind, and to the side of, the patient. He grasps the patient's occipital bone between the index finger and thumb of one hand, allowing the hypothenar eminence to rest on the spinous process of the lesioned vertebra, while the thumb and index finger of the other hand grasp the frontal bone.

(b) Movements: The head and cervical column are extended and traction maintained, using the cervical column as a lever. The tension is increased by rocking or forced extension.

(c) Test for motion.

Type of lesion.—Bilateral extension (backward bending).

Diagnosis.—The spinous process of the lesioned vertebra approximates the one below it, and the inferior facets of the lesioned vertebra have glided downward on the superior facets of the vertebra below.

Normalization.—

(a) Position: The patient is supine. He is instructed to clasp his fingers back of his neck. The physician stands to the left side, facing the patient's head. He passes his left hand and forearm around the patient's left side, and underneath the patient's body, placing the hand posterior to the lesioned vertebra, or the vertebra below if acting as a fulcrum. The right hand is placed posterior to the patient's occipital bone.

(b) Movements: The head, cervical and thoracic regions are elevated until muscular tension is felt down to the lesioned vertebra. This flexion tension is maintained while the left axilla presses down on the patient's elbows, moving the lesioned vertebra in a backward, upward direction. At the same time the patient unlocks the fingers and exhales.

(c) Test for motion.

RIBS

The same correction as for bilateral extension lesions with this difference, the left hand is placed lateral to the right costo-transverse articulation, and the pressure is through the corresponding vertebra. This causes a costo-transverse separation and motion.

12 South Twelfth Street

Summary

RALPH L. FISCHER, D.O., M.Sc. (Ost.)
Professor of Practice of Osteopathy and Clinical Osteopathy
Philadelphia College of Osteopathy

Cardiovascular failures in middle life may be classified into four types, each distinctive in its clinical manifestations: first, vascular accidents, such as cerebral apoplexy; second, coronary accidents; third, aortic pathology; and fourth, myocardial failure. Several of these types may be coexistent.

The principles underlying the application of osteopathic philosophy in the management of heart failure have been amply discussed. While prognosis for cure is unfavorable in most instances, the outlook for relief and for the prolongation of life varies in each case.

The diagnostic appraisal is based upon the sum total of facts obtained from the history and the physical, electrocardiographic, and radiographic examinations.

In cerebral apoplexy, the symptomatology reflects a circulatory defect in the brain. Alterations in motion, speech, and nervous reflexes, as well as dizziness, vertigo, and mental irritability are characteristic. The blood pressure, especially the diastolic, is elevated, and the eye grounds usually show direct evidence of arterial hardening. Syphilis and renal insufficiency are most often causative.

When coronary disease is present in the arteriosclerotic heart, precordial distress, angina pectoris, and syncopal attacks are common. The arterial tension decreases as the pulse increases in rate and decreases in volume; cardiac rhythm is disturbed and the radiographic study shows decreased or irregular ventricular activity or evidence of localized pericardial adhesions and myocardial infarction. Leukocytosis, fever and increased erythrocytic rate of sedimentation are common. Deep Q_3 waves and alterations in the RS-T segment of the electrocardiogram, especially in leads IV, V, and VI are diagnostic. Diabetes or other metabolic disturbance, as well as defective innervation, are usually at fault and syphilis but rarely. Sudden death occurs in the majority of cases.

Aortic pathology causes circulatory symptoms in the brain—sleeplessness, dreaming, and dizziness being most common. Pain, often anginoid, is usual. Adventitious signs are elicited at the clinical base

ot the heart; variable amplitude of pulse and blood pressure is diagnostic. The x-ray shows distinctive alteration in the aortic and left ventricular silhouettes and the electrocardiogram indicates a left ventricular preponderance (inversion of QRS in lead III). Syphilis is the most frequent etiology, but streptococcic infection and renal insufficiency are important. Syncope and sudden death are common.

Myocardial (congestive) heart failure is characterized by gradually increasing manifestations in all parts of the body—cough, dyspepsia, dyspnea, edema, anasarca, bilateral signs of basal and hilar congestion of the lungs, enlargement of the liver, and faulty renal function. Radiograms demonstrate cardiac enlargement and pulmonary thickening or pleural effusion. A history of previous infection, especially streptococcic, is common; syphilis is rare in this condition. Sudden death is uncommon, months and often years elapse before the event.

Absolute rest is required in all cases of heart failure, and the return to activity is graduated within the point of breathlessness. The dietary is low in calories with a high carbohydrate and vitamin content. Small meals, often, and restriction of fluids are advised. Drugs are of no use in cerebral apoplexy or aortic disease, unless syphilis is present. Diathermia, especially short wave, may be used when precordial pain is present, and oxygen inhalations when dyspnea is severe. Manipulative treatment must be directed exclusively to the spinal structures, with a frequency depending upon the severity of the disorder and the classification of the cardiac patient. In Class 1—those able to carry on ordinary activity—the usual manipulative treatment may be given. In Class 2—those unable to carry on ordinary activity—stretching and passive spinal mobilization are indicated. In Class 3—those unable to carry on any activity—the patients are treated oftener, but without voluntary movement of their bodies.

Of all the agencies available for the management of heart failure in middle life, but one is constantly effective—osteopathic spinal manipulation, directed with an understanding of the pathological physiology and the individual patient's vitality.

6112 Germantown Ave.

Cardiovascular Section of the Scientific Exhibit, The Philadelphia College of Osteopathy

OTTERBEIN DRESSLER, D.O., Chairman
A.O.A. Committee on Convention Scientific Exhibit

A. Embryology of the Heart.—Complete set of plaster models to show development of same.

B. Anatomy of the Cardiovascular System.—Injected cleared preparations of the coronary system; placental circulation; dissection of the circle of Willis; live daphnia projected to exhibit circulatory apparatus.

C. Physiology of the Heart.—Mechanical models (2) to illustrate dynamics of circulation; projections of live daphnia on a screen to show circulation and activity of the heart.

D. Pathlogy of the Cardiovascular System.—

1. Congenital defects: Patent foramen ovale.

2. Retrogressive processes: Brown atrophy of the heart.

3. Endocarditis and congestive failure: Mural endocarditis; subacute bacterial endocarditis (2 cases); metastatic abscesses in the spleens from above (2 cases); chronic mitral disease with congestive failure (cyanotic induration of the spleen, passive congestion of the gastric mucosa, passive congestion of the liver—nutmeg); concentric hypertrophy of the heart; aortic regurgitation (syphilitic) with left ventricular dilatation.

4. Pericarditis (1 case).

5. Syphilitic Aortitis: Dissected to show valvular involvement; aneurysm of aorta to show pressure on the trachea; aortic aneurysm ascending limb; aortic aneurysm saccular of the arch; saccular and dissecting aneurysms of the thoracic aorta.

6. Coronary Disease: Coronary obstruction (2 cases); coronary obstruction with aneurysm of the left ventricle.

7. Arteriosclerosis: Arteriosclerotic kidneys (2 cases); atherosclerosis of the basilar artery; atherosclerosis of the pulmonary arteries (2 cases); advanced atherosclerosis of the abdominal aorta.

8. Hemorrhage: Apoplexy with hematoma of the cerebral ventricles; fracture of the kidney with fatal hemmorrhage (automobile injury).

Scientific Exhibit of the Philadelphia College of Osteopathy.

E. Charts. — Illustrating statistical studies of cardiovascular disease.

F. Electrocardiograms. — Thirty-nine selected cases to illustrate various classical and some unusual cases with abstracts of the clinical case; charts to illustrate normal electrocardiograms; charts to illustrate the planes of electromotive forces picked up in electrocardiography in six leads.

Complete Hysterectomy—Its Place in Surgery*

ALBERT COLLOM JOHNSON, D.O.

Detroit

Why hysterectomy, and to what extent hysterectomy? The problem oftentimes is a real one, but the solution is not so difficult as is that having to do with many other operations. For instance, the decision regarding amputation of the breast appears to be far more important. One hesitates as he contemplates the result of bad surgical judgment in the treatment of mammary gland tumors. To err on the side of conservatism is to run the risk of metastasis with the resulting death of the patient; whereas, to adopt the radical viewpoint is occasionally to mutilate a patient unnecessarily.

The surgeon's decision regarding the removal of the uterus is arrived at with less fear of mistake. The greater proportion of women who present themselves for treatment of uterine disease or dysfunction are approaching the last few years of the childbearing period or have already become acquainted with menopausal symptoms. Most of these women have had one or more children, and it is only rarely that we find one who desires more offspring. Ordinarily, the victim of uterine pathology gives up her diseased uterus without any qualms of regret once she is convinced that her sexual life will suffer no ill effects worthy of mention, and when she understands that the removal of the organ is not invariably followed by an uncontrollable increase in body weight!

This attitude on the part of the patient, in a way, adds to the responsibility of the surgeon. He is likely to find it more difficult to sell himself on the operation when he finds the patient's sales resistance so easily overcome.

Owing to the technical difficulties encountered in some hysterectomies, the operation is not so lightly considered by the aspirants to surgical careers as is the more common appendectomy. Many who gleefully dive in after the elusive appendix, and who have no forebodings of calamity to draw out the beads of sweat upon their brows, all too often turn pale as their searching fingers by accident touch little fibroid nodules on the uterus lying down below.

To be sure, the more intrepid ones will overcome the empty feeling in the region of their solar plexuses and will settle down to their tasks like good soldiers and will obtain their specimens, sans cervices, which they proudly show to other prospective customers.

But it is in the all too-prevalent custom of allowing the diseased cervices to remain that certain postoperative symptoms have their origin.

It would be a wonderful thing if womankind had been built differently, in respect to the uterus. Had Nature been so kind as to place the entire organ either in the abdomen, or outside it, the hysterectomy patients would probably receive greater benefit from their operations!

As it is, the uterus does not lend itself to removal so easily. It is two-thirds inside and one-third outside the abdomen, and the place where it is attached is surrounded by a number of structures which are prone to embarrass the inexperienced or careless surgeon.

It is very easy to leave the lower one-third in situ! It oftentimes appears impossible to remove it. As a consequence, too many women fail to receive full value for the money they pay.

Sturmdorf, more than any other surgeon, has done much to change the thought of those who formerly were in the mood to perform the supracervical hysterectomy, thereby removing the good and allowing the bad to remain.

It undoubtedly is true that the uterine cervix is the first portion of the pelvic organs of generation to fall before the onslaught of ascending infection. Certainly no gonorrheal pus tube ever came into its deplorable state without the cervix previously knowing about it. Furthermore, all the various other results of infection, such as ovarian cysts, metritis, sterility, etc., are due to the open portal and cesspool of contamination residing in the uterine cervix. If the uterine fundus is diseased, the uterine cervix is not innocent—not by any means.

We must not get the mistaken notion that pathologic bacteria must be present within the pelvic tissues or resident upon the serous surfaces in order to bring about the organic changes so commonly found within the female pelvis.

Not all types of bacteria are capable of migrating through tissue spaces or along serous surfaces. Those that prefer the depths of tissue must run the gauntlet of the lymphatic system. Those bacteria that prefer to travel upon the surface are stopped by the patient's resistance and by the protective adhesion formations which serve as mechanical barriers.

And we must not forget that bacterial toxins set free from a focus of infection are prone to create havoc at a distance. Bacterial toxins oftentimes are permitted to flow long distances before they are neutralized by the chemical antagonists thrown out by the body.

Sturmdorf tells us plainly that the commonplace foci of infection to be found in the cervix are responsible for low-grade toxic metritis, endometritis, ovaritis, etc. If such is the case, is it not reasonable to suppose that the common cystic ovary is merely an index of the infection to be found in the cervix?

In this connection it is interesting to recall the years-old opinion of pioneer surgeons who learned by observation that the removal of one

*Delivered before the Obstetrics and Gynecology Section of the Fortieth A.O.A. Convention at New York, 1936.

cystic ovary was followed by cystic degeneration of the remaining ovary. However, if the uterus was removed at the time of the ovarectomy, the remaining ovary failed to undergo the cystic degeneration. In other words, hysterectomy blocks the flow of bacterial toxins through the regular channels, and the ovarian covering escapes the toughening effects of the irritating fluids, and the Graffian follicles rupture unhindered.

Critics are prone to remind us that the menopausal effects of hysterectomy are deplorable and would be prevented whenever a more conservative attitude succeeded in saving a uterus. But there are many surgeons who are of the opinion that the cessation of menstruation is due only to the removal of the organ of menstruation and not to any interference with ovarian function. Following hysterectomy, menopausal symptoms, other than the cessation of flow, are comparatively rare in the practices of those surgeons who have respect for living tissue and who consequently use a delicate and nontraumatic technic. Indeed, it is the experience of most patients to notice some of the former sensations of the menstrual period, month after month, just as if there had been no surgical interference. In time, these cyclic experiences fade out, perhaps because the coming of better health does away with the discomforts of menstruation. The sound woman in perfect health should menstruate without discomfort.

It seems superfluous to discuss the necessity for hysterectomy in those cases in which fibromyomatous, or other benign, nodules can be diagnosed clinically. There are a few physicians who favor the use of the x-ray for the arresting of such tumor growths. Although there may be an occasional patient who might better be treated by x-ray therapy, the consequent damage to ovarian function and the likelihood of later recurrence of the growths, leads one to question the advisability of the method.

The problem of the precancerous cervical lesion is difficult to solve. The choice between complete hysterectomy, deep cauterization or surgical amputation, must be made. If the surgeon were able to determine definitely the depth of the tissue that might some day become cancerous, he could amputate the cervix at the proper level and feel confident that he had eradicated the disease. If he is unable to determine the extent of involvement, radium therapy or deep cauterization seem reasonably certain. Hysterectomy, complete hysterectomy, on the other hand, will cure the precancerous cervix for all time. This also is true of the benign tumors of all sorts, most of which are beyond the reach of the cautery and which are not of sufficient danger to call for the destructive action of radium. But the hysterectomy in cases having benign tumor masses should be complete hysterectomy, for no one has the right to say that the cervical portion of the uterus is free of tumor tissue even if there are no palpable tumor masses therein. The cervical stump which harbors a rapidly growing benign tumor is capable of trying the skill of the best of surgeons.

The definitely cancerous uterus is a problem in itself. Most surgeons lean to the side of conservatism, being inclined to rely upon radium therapy. The removal of the uterus wholly or in part usually is contraindicated.

The removal of uteri in which there are no tumor masses or so-called precancerous lesions may seem somewhat radical to the more conservative among us. Physicians for the most part are inclined to treat for long periods of time, the uterine infections, degenerations and lacerations, only to learn that such efforts seldom restore the patients to normal health. It is very likely that complete hysterectomy in these cases will do more in thirty minutes to make these patients comfortable tnan will thirty months of office treatments.

Many surgeons, always conservative, are of the opinion that tissues macroscopically free of disease changes should be allowed to remain. For instance, it is not uncommon to witness bilateral salpingectomy in a patient whose uterus appears to be quite normal. It should be a foregone conclusion that a diseased uterus is present if the tubes are diseased. If the tubes are removed and the uterus is allowed to remain, the patient cannot possibly become pregnant and she runs the risk of harboring for the rest of her life a diseased organ which has very little excuse for being there. (The one exception to the last point is the woman who needs the bulk of the uterus to aid in supporting the abdominal viscera.) There is not much evidence that the uterus is of importance other than as a container for the developing fetus. Once the possibility of pregnancy has been removed, the uterus, which invariably is a part of the original disease process and a site for future carcinoma, should be removed.

If the surgeon's decision calls for hysterectomy, the removal of the uterus should include the removal of the cervix. The immediate postoperative recovery is more rapid and more smooth, and the remote effect upon the patient's general health is almost invariably more satisfactory.

Detroit Osteopathic Hospital.

Painful Affections of the Lower Back

Plaster casts should not be used in the treatment of sprains or strains. If properly applied they protect the joints involved, but their effect is far reaching, both physically and mentally. They produce muscle atrophy and joint stiffness; their effect on the patient's mind is decidedly unfavorable, since they make the patient feel the injury must be very serious indeed to require such treatment. This is particularly true in industrial accident cases.

During the period of ambulatory treatment, supportive measures should be supplemented by exercises. These at first consist chiefly in assuming corrective positions, followed later by exercises which tend to correct faulty position and increase the mobility of the spinal joints.

Manipulative treatment is indicated only if the physical examination yields evidence of a disaligned sacroiliac joint. The principle of such manipulation is hyperextension of the spine and hip . . . If this is not sufficient then active manipulation by the surgeon may be undertaken, with or without an anesthetic. *Osteopathic treatment is on the whole consistent in these conditions and orthopedic surgeons make use of it, only under a different name.* (Italics ours)—M. N. Smith-Petersen in "A Textbook of Surgery" by Frederick Christopher. W. B. Saunders Co., Philadelphia, 1936.

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THE FUTURE IN RETROSPECT

We have been able to discern many of the earmarks and directions of movements in socialized medicine, and we have been able well in advance to advise those in positions of responsibility in the profession. Our advice has not always impressed those in authority. At times it has been discounted as a bugbear. Yet, our then prophecies are today's facts. Whatever digressions or omissions there have been on the part of those in authority, have proportionately robbed the public and the profession of the protection expected. The time has come to view and to prepare for additional problems. Is the past to be redeemed, or will history repeat itself?

A few months before the Social Security Act was introduced in Congress, President Roosevelt let it be known that although health insurance has its proper place in a rounded out social security program, consideration of that phase would have to wait until after legislation on unemployment insurance and old-age pensions. When the Social Security Act was introduced, it contained an express provision directing the Social Security Board to investigate and recommend legislation on health insurance. As the Act was finally passed, health insurance was removed from the list of the specific subjects to be investigated, but it was generally conceded that that did not divest the Board of authority to investigate and recommend legislation on health insurance. An advisory body set up by the Committee on Economic Security was able only to make general recommendations at the time the Committee made its report to the President, prior to the introduction of the Social Security Act, and was given additional time to complete its studies and report.

Among the preliminary recommendations made at that time by the Committee on Economic Security to the President was the following: "The role of the Federal government is conceived to be principally (a) to establish minimum standards for health insurance practice, (b) to provide subsidies, grants, and other financial aids or incentives to states which undertake the development of health insurance systems which meet Federal standards." Organized allopathy in its own conclaves condemns health insurance, but at the same time sits in government and private councils planning the advent of health insurance systems on a national scale. The allopathic platform for health insurance contains the significant plank that "Patients must have absolute freedom to choose a legally qualified *doctor of medicine* who will serve them from among all those qualified to practice and who are willing to give service."

Another problem is present in the suggestion of Senator O'Mahoney for national incorporation of concerns doing interstate business, which if carried into effect is expected to amount to a revival of the salient features of the NRA. Health provisions incorporated in codes under NRA did not discriminate against the employment of osteopathic physicians in cases of industrial medicine. Organized allopathy attempted to have written into the codes that only M. D.'s would be permitted to attend industrial cases or practice industrial medicine.

Health insurance and compulsory health provision are on foot. State maternal and child health plans, state crippled children plans, state child welfare services plans, and state public health work plans *have arrived*. Allopathic committees recommended to the states that osteopathic physicians be banned as state and municipal health officers, and be denied participation in state plans furnishing professional services to crippled children and needy mothers and children, and organized osteopathy in a number of the states has let those boycotts be written into law.

It is the duty of organized osteopathy to insure the availability of the benefits of modern-day osteopathic practice to everyone in the community, regardless of income group, employment status, or station in life. Osteopathic physicians are called upon to take stock of the modern social aspects of private and community health. Officers of divisional (state) societies are recognized leaders in their profession. Their stewardship extends to the public as well as to the profession. Let there be state and local plans for osteopathic health education, and health publicity, and performance.

C. D. SWOPE.

A NEW YEAR'S RESOLUTION

Too long and too often have we thought of New Year's resolutions as negative things. We have resolved to stop this, to discontinue that, and to abstain from the other thing.

Let us make a positive resolution. Let us begin now to budget our time and finances so as to insure our attendance at two (at least) osteopathic conventions in 1937—that of our divisional society, and the record-breaking national convention scheduled for Chicago the week of the Fourth of July.

The inspiration to be derived from these meetings is not to be measured. At our divisional society convention we will find new spirit, new determination, new knowledge, improved methods, and increased co-operation with organized osteopathy everywhere. This experience will represent,

not a sacrifice which we resolved on New Year's day that we would make, but a high privilege and opportunity—a good investment of time and money.

Attendance at divisional as well as national meetings brings us into intimate association with men and women whose hearts are burning with high resolve—doctors of osteopathy who are sacrificing not only their leisure, but also the time when they should be treating patients, or developing themselves by studying textbooks and current journals. They are making this sacrifice not for any outstanding benefit which they will derive, but rather because of their love for humanity and for osteopathy, that great calling to which their lives are devoted.

These workers will be busy in early morning sessions, at midday, and late at night, studying the problems of osteopathic education, of osteopathic research, of osteopathic service to those who need it, to make or keep them well. Some of these workers will be striving for better, more scientific, more efficient, more fundamentally osteopathic hospitals. Some will be struggling with the problem of convincing workmen's compensation officials, legislators, insurance company executives, and others, of the advantages to themselves and to humanity which will accrue from a proper recognition of osteopathy. However much these workers may have sacrificed in time and money, to get to such a meeting, we will find them ready and glad to exchange experiences and information with you and me.

We will come to Chicago next summer and observe how completely the largest hotel in the world is given over to osteopathic meetings and osteopathic scientific exhibits and osteopathic commercial exhibits and osteopathic doctors and their families. We will look back with swelling pride on the tremendous strides which osteopathy has made since the American Osteopathic Association occupied a little part of a small hotel in Chicago at two successive annual conventions in 1919 and in 1920.

Having congratulated ourselves and our colleagues on the advancement that osteopathy has made therapeutically, educationally, legislatively, organizationally, and in the field of public relations, in these seventeen or eighteen short years, we will stop and study our surroundings, and the advancements achieved in other lines, to see what a complete perspective will do to our self-satisfaction.

Chicago has changed, in these years. In 1920 we were housed in a hotel that boasted a thousand rooms —one of the largest in the city. This year we will meet in the Stevens, which has 3,000 rooms, each with bath.

We were thrilled by the power and speed of the steam locomotives which brought us to Chicago in 1919 and 1920. Little did we dream of the streamlined trains that would bring us when next we gathered here for a national osteopathic convention, nor did we imagine what proportion of us would come by still more modern and expeditious means of transportation than even the streamlined trains.

Some of us remember how, in the summer of 1919, we stood on Michigan Boulevard and watched one little airplane come to rest in Grant Park after its breath-taking flight in bringing mail from Cleveland. Now perhaps we will go out to the airport and see the mighty monsters of today coming in at frequent intervals from all points of the compass, carrying not only mail, but also passengers and express and freight.

Exultantly we will compare the air squadrons of today with that one tiny mail plane of 1919. Then with a sobering start we will look at the progress osteopathy has made—not so complacently as we did. We will ask ourselves: "Has our profession—has our science—really kept pace? Have we been comparing it with the rapidly moving procession of civilization, or have we believed we were making satisfactory progress simply because we were watching some stationary landmark along the way?"

We cannot waste time on negative resolutions. To stop doing this or that, means but little. There are so many things which *must* be done—shall we go on record with a written resolution, sending copies to our divisional and our national association leaders, and keeping one to remind ourselves each day?

The airplane of 1919 far exceeded, for speed, any other mode of transportation that had ever been developed up to that time. But driving competition or overpowering ambition forced the builders and the pilots of airplanes to devise constantly and progressively better machines. Osteopathy in 1919 was better than anything else which the therapeutic world had known, but we who practice it, blind alike to growing competition and to opportunity, have been content with an early model. We have permitted men and women to die, whose lives we might have saved. We have allowed the gap between ourselves and the allopaths to be shortened as they have learned new applications of natural healing while we have drifted. We have allowed ourselves to be all but throttled by a growing politicomedical machine when influential lay friends would have demanded justice for our system if we had devoted ourselves to the development of our science with even half the intensity that has characterized the makers of machines. That is one reason we must, today, spend so much energy on mere negative, nonproductive effort—on a defensive fight to keep our heads above water—when we should be doing positive, productive, things for osteopathy and for humanity.

. . .

Now what about that New Year's resolution? Did we resolve a few moments ago to budget our time and finances so that we could attend two (at

least) conventions this year—that of our divisional society and that of the American Osteopathic Association? Do we now more firmly determine to keep that resolution? Is that enough, or are we ready in addition not only to devote a specified time each day, to such professional advancement as you and I would get from a conscientious study of a textbook or a journal, but beyond that to devote a definite minimum of time to the unselfish service of our profession? If we hold any position of trust and responsibility in the osteopathic organization, from the highest to the lowest, do we resolve to strive more seriously and sincerely than we have done in the past? If we hold no such place, shall we sit down today, consider where best we will fit, and call up or write to someone who is heading a committee or a bureau, and volunteer to help?

REFERRED PAIN

The whole field of referred pain is much more complicated today than several years ago when all pains were considered either viscerogenic or somatogenic. A statement similar to this is made by Dr. Frederick A. Long* in a recent article in *Osteopathic Digest*, the official organ of the Philadelphia College of Osteopathy. Dr. Long says it is difficult to differentiate at times between pains of visceral origin and those of somatic production. One surgeon reported to Dr. Long within the past five years that in well over 50 per cent of the cases diagnosed as acute appendicitis and operated upon as such by him the entire symptom picture was produced by factors completely outside of the appendix. Most of these factors he located in the spine and he included such states as faulty posture, poor body mechanics, spondylitis, and the spinal lesion.

Who has not seen the patient who has recently had a bad appendix removed, but who still suffers with pain of an appendiceal-like character? It is known, among osteopathic physicians at least, that such referred pain may be somatic in origin and not visceral—that the source of the pain may be found in spinal joint alterations produced at the time of the attack of appendicitis. Dr. Long explains clearly how these lesions may be produced and why they remain even after the original source of irritation has been removed. He gives substance to the arguments for both preoperative and postoperative care.

While simple muscular rigidity of the spine, caused reflexly by an inflamed appendix, probably does not initiate the pathological changes noted in the spinal lesion, such contraction of muscles could greatly interfere with normal vertebral mechanics. Irritation to joint surfaces results when they are compelled to function in abnormal planes, and the well-known inflammatory reactions associated with spinal lesions are started. Dr. Long says that an understanding of this mechanico-physiological phenomenon "helps to lay the groundwork for explaining how such a slight amount of involvement as the spinal lesion can frequently produce such disastrous results while gross alterations of structure such as found in scoliosis often do not create much disturbance."

Another phenomenon which makes the diagnosis of referred pain complicated is allocheiria, in which a stimulus applied to one side of the body is referred to the other side. Somatic tissue becomes an area of low sensibility in relation to some other and normal somatic tissue. In these instances, the levels of pain do not coincide with the levels of major lesion reactions, but will be those of the closest related normal level. Hence the pathological changes that occur in a spinal lesion can produce referred pain in a somatic area in segmental relationship with an organ that may or may not be inflamed. Pain, then, may be a liar if strict segmental innervation is adhered to in correlating somatic and suspected visceral zones.

Even greater variations in referred pain may be found clinically that cannot be explained by the phenomenon of allocheiria. It is possible that pain in the low back (the lumbosacral region) may have its origin in somatic or visceral tissues segmentally related to nerves of the lower thoracic region. Dr. Long says that the explanation may be found in the physiology of synapses. Afferent impulses may not be able to break through the synaptic barriers at the level at which they enter the cord, but they may ascend or descend in the cord until a relatively weakened level (through spinal alteration or other lesion) is reached where the impulses do break through and evidence of pain is forthcoming in a region not at all related segmentally to the original region of inflammation or irritation.

Since pain, usually, is the complaint that sends patients to their physicians, this symptom should be one that deserves thorough analysis. We of the osteopathic profession should not be guilty of sending patients to surgery on the basis of pain alone when this symptom may be caused by spinal lesions. Neither, as Dr. Long brings out, should we be guilty of claiming cure of a supposed visceral disorder by stopping pain with spinal treatment when such disease did not even exist. One reason for the advances which osteopathy has made, is found in the fact that osteopathic physicians have been blessed with knowledge which has enabled them to analyze referred pain more accurately than their contemporaries could do. We must not fail to use this knowledge but to be satisfied with it will be fatal. We must hold our place in the vanguard professionally, in the discovery and utilization of newer knowledge, or we will find ourselves overtaken and left behind by the rapidly awakening allopathic profession.

R. E. D.

*Long, Frederick A.: An Osteopathic Consideration of Certain Factors in Referred Pain. Osteopathic Digest, Scientific Supplement. 1936 (Nov.) 2:5-9. Reviewed in the Current Osteopathic Literature section of this issue of THE JOURNAL.

THANK YOU

The Public Relations Committee of the American Osteopathic Association, and the Central office hereby express their hearty thanks to those in the field who have responded so loyally and so quickly to the recent request for co-operation. The work was one greatly needing to be done and this was the best way to do it.

Special Article

The Most Dangerous Decade*

PERCY H. WOODALL, D.O., M.D.
Birmingham, Ala.

According to the most reliable statistics available, the average woman dying today in the United States, has lived slightly more than six decades, and the average man slightly less than six. Why Mother Nature should favor the so-called "weaker sex" is not altogether clear, unless it be for causes to be discussed later.

These six decades are a wonderful source of opportunity. From their store the golden ore of love and service may each day be drawn, and as each day passes there remain twenty-four hours less in which to love and to serve before the final reckoning. Each day lived leaves the total expectancy diminished by that much, so the anticipated life of the boy or girl, the man or the woman, is diminished by each day's existence.

This fact has been very bluntly stated by Frances Quarles, who said, "He that begins to live begins to die." By another more poetically but none the less truly:

"Whether the cup with sweet or bitter run,
The wine of life keeps oozing drop by drop,
The leaves of life keep falling one by one."

The years so few, the responsibility so great, the time so precious, it behooves us to consider whether one of these decades is the most dangerous, or the most vital, to the end that the dangers may be avoided or averted, the disease and suffering decreased and the sum total of happiness and service augmented.

By the most dangerous decade we do not necessarily mean that decade in which most deaths occur, but rather that decade which determines more than any other, the limit not merely of the number of years to which one shall attain, but rather the quantity and the quality of one's ultimate achievements—one's value to society. Mere empty years mean nothing.

That decade is the most dangerous that initiates the weaknesses that undermine the inherent resistance of the individual and predetermines by what disease and when he is to die. If such a decade can be recognized, the weaknesses discovered and remedied, or avoided, it will prove the golden decade that not merely multiplies the years, but so fills them with accomplishments that society is the debtor of the individual until the very end of a useful life. It is the decade which, more than any others, shall determine whether at the age of 60 "it might be a good thing" according to the late lamented Dr. Osler who was quoting airily from Trollope's "Fixed Period," "if all were peacefully chloroformed . . ." or whether at that age one shall be forging ahead with faculties undimmed, vitality abundant, and usefulness increasing as the years roll on.

*Delivered before the General Sessions of the Fortieth A.O.A. Convention at New York, 1936.

According to statistics, the first year of life is the one in which most deaths occur. But for the research of a French chemist this toll, great as it is, would still be many times greater. To him infancy and childhood owe freedom from many diseases that formerly wrought untold havoc in their young lives. The pasteurization of milk, the preservation of food, such value as there may be in the protective serums and vaccines, the demonstration that death lurks in dirt, and that an object to be surgically clean must be germfree and sterile, are all due to the thought and the painstaking experiments of this most modest but greatest of the sons of France, Louis Pasteur.

His work, with other influences, has tended to make the first decade of life a protected decade. Older minds with knowledge and experience and authority can impose their wisdom upon this decade better than upon any succeeding one. During the first ten years of life, restrictions and regulations can be enforced with a greater degree of certainty than at any later date. Immunity to many diseases has been attained by the age of 10.

By the time the middle of the second decade is reached, the independence of the boys and the girls begins to assert itself; they begin to think their own thoughts, they throw off restraint and generally become restive to authority. They must experiment and know for themselves. This is natural; it is to be expected; it has been the role of youth through past generations, yet it marks the beginning of this most dangerous, the most thrilling, yet, if properly regulated, the most glorious golden decade that shall make the future full of health and efficiency.

So I would say that from the middle of the second to the middle of the third decade, from the age of fifteen to that of twenty-five, is the decade that determines more than any other the future of the individual measured in terms of longevity, and is therefore the most dangerous, and at the same time the most promising.

It is the beginning of a new outlook on life; childish thoughts and activities are put away and the man and the woman emerge.

The supreme wisdom of adolescence, illogical and full of inexperience and fallacies, is manifested. This is the time of dreams and adventure. There is not merely one, there are many, worlds to conquer. Consequences are something of which no thought is taken and recklessness runs riot. The physical senses become rampant and commonsense abdicates its throne.

It is the age in which habits most vital to the future welfare are formed and become fixed. The tempo of life for the future is set. Habits of eating, drinking, posture, as well as others, become permanent, either for good or ill, as they are correct or vicious.

Vocations are chosen often by chance regardless of whether they are wholesome or not. Vocation often determines posture and this has a most important bearing upon the future health of the individual.

This is the decade of greatest emotional strain. A philosophy of life has not yet matured.

This is the decade in which most venereal infections with their brood of consequences occur.

This is the decade of greatest neglect, except to the favored few, in physical training. It is with joy that I notice that our educational authorities are developing the courage and the good sense to make serious athletic training universal and compulsory in our schools and colleges. Heretofore the training has been given to those who least needed it. Too long such training has been centered on track teams, baseball, football, etc., in which the most favored physically were selected and the major effort of athletic training has been devoted to making supermen of these favored few. I do not say that this should not be done, but I do insist that school athletics be devoted, in the greater part, to physically developing the mass of students who need it most and not to that small number who need it least. What is the advantage of training a mind and so neglecting the body that it lacks the physical efficiency to support the relatively overdeveloped mind? Body and mind must be developed impartially if the individual is to reach his full usefulness.

Physical training should be for the masses, and its goal should be for physical perfection and endurance. Physical efficiency is the basis of all achievement. The body is the lowly means through which accomplishment is possible. There may be rare exceptions to this general rule, but physical weaklings have not generally been conquerors in any line.

Success, in any field, in its fullest sense, whether in the pulpit or the pugilistic arena, in engineering or engraving, in farming or finance, as an executive or clerk, poet or plowman, is largely dependent upon a sound and efficient body. It is true that a few, geniuses we call them, have attained success with weak and defective bodies, but they have paid an enormous price in pain and anguish—and geniuses are very rare.

Finally it is the decade of greatest physical strain and stress. Every boy during this decade feels surging through him the desire to excel in some field of physical endeavor. In his imagination he is a knight, a reincarnated king, a Samson, an ancient hero, and he tests his strength and prowess in many different ways. Besides this, most of the games he plays are competitive. In these, every emotion is stimulated to have him do his physical utmost. Because of insufficient physical training the youth in many instances is unprepared for these strains and stresses potentially disastrous.

The daring of youth brings in its train many accidents. These, besides the injuries received in competitive games, leave their marks, easily recognized by the trained examiner, upon the body machine that in mature years remain as weaknesses and final determinants of deterioration of body functions. Many of these injuries are given only passing notice at the time but remain to plague and perhaps to destroy the individual in later life. The diseases most dangerous in middle life are not primarily the infectious diseases, but the so-called "degenerative" diseases. It is true that some of them may be the remote results of infections, but many are the direct result of adolescent overstrain and injury.

What can we as a profession do to make this decade, not merely less dangerous, but even one of opportunity, to make the remaining years more numerous and with less of disease and more full of happiness and service? We, as a profession, are not specialists in every line of youth training; but there are some things in which we can advise, there are others we can do.

We can insist that more attention be paid in our schools to personal hygiene; that the importance of a sound and well developed body for the battle of life be taught our youth. We can impress them with the fact that life is not just for the pleasures of today, but that there are active and useful decades ahead for which preparation must be made. Certainly the human body, the fundamental element in the success or failure of the individual, its structure and physiology, its proper use and possible abuse, is worthy of more than cursory interest. Indeed, this is the most necessary of all knowledge. If the curricula of the schools as now arranged are too crowded for this, there are certainly a number of less useful and practical subjects for which this teaching can be profitably substituted. Can any knowledge be more important than knowing how safely to operate and properly to care for this priceless and irreplaceable body machine?

We can insist that physical training for *all* be made compulsory and that emphasis be placed upon physical efficiency and endurance so that the body may survive the years to come, and not merely be made the means of securing a few years of college glory. This means the development of the whole body that it may be symmetrical, well poised and efficient.

We can advise employers to give at least as much attention to the working conditions of the men and women they employ as they do to the inanimate machines they use. They do not expect these human workers to operate the machines with the latter in positions of unbalance and strain, and they should, from economic as well as humanitarian interest, be as considerate of these human machines.

We can advise on correct posture both while working and in leisure. This is a matter of transcendent importance in matters of health. No machine is expected or allowed to operate in the malposed, unbalanced, inefficient and disadvantageous position that the human body is forced at times to occupy. It is most distressingly inconsistent that, with the emphasis we as a profession place upon body structure, we present such a proportion of stoop-shouldered, malposed and paunch-protruding members. I sometimes wonder whether we really believe in the principles we profess. If we do we should give more attention to our individual body carriage.

We can insist that our school children, in addition to the other examinations now given them, be examined by a physician who understands body structure. We can further insist that such examinations be made periodically, that comparisons be

made from time to time, and defects in body structure corrected.

We can advise on matters of sex education and venereal prophylaxis and do our part in the cure of those infected.

We can advise upon the emotional problems of this decade.

Our distinctive contribution to the solution of these problems is invaluable. It is the application of the principles of anatomical engineering, the adjustment of mechanical derangements of the body machine. Fundamentally, mechanical order in the body, more than any other single factor, is the basis for good health. To establish and to maintain this will rob the most dangerous decade of its malign influence and insure health and activity for the longest possible period.

Designed by the Master Engineer, the human machine has been endowed with a wonderful factor of safety. There is strength and function in abundance. Every organ and tissue is generously endowed with ability to stand ordinary wear and tear as well as a reasonable overload. Yet there is a limit beyond which it cannot go. It is not usually the single strain or stress, but repetitions and accumulations that wear out the machine. There are many diseases in which only mechanical factors can be found, there being no discernible bacterial or chemical disturbance. The beginning of the deterioration is on the mechanical side and often directly traceable to some definite injury during this most dangerous decade.

Since it is primarily a mechanism, a living one it is true, the body is subject to mechanical laws. From disobedience to these, many diseases arise primarily and a host of others secondarily. It is the dictum of all schools of healing that in general germs cannot live in healthy tissues. There must be some first cause that renders the tissues vulnerable. What causes can be so potent as mechanical ones, that decrease nutrition to a part by interfering with its blood supply, that increase toxicity by interfering with drainage, and that disturb trophic impulses by disturbing innervation?

The necessity for mechanical order in the body was first appreciated by Dr. A. T. Still, who declared that "man is a machine." He said, "As I was an educated engineer . . . I began to look at the human framework as a machine and to examine all its parts to see if I could find any variation from the truly normal . . . I began to experiment with man's body as a master mechanic would when he had in his charge any machine which needed to be kept perfectly adjusted and in line in order to get perfect work . . . I worked along faithfully, patiently, and hopefully, finding out that the human body was just as liable to strains and variations as a steam engine, and that after correcting the strains and variations, health was sure to follow."†

Dr. Still was the first *anatomical engineer*. He was the first to conceive of the body primarily as a vital mechanism and to declare that proper body mechanics is the law of health. He was the first to appreciate the fact that *minute* derangements in structure are related to general disease. He was the first to affirm that mechanical order in the body is the chief consideration in curing disease. He did not deny the part that heredity, environment, habit, emotions, overuse and abuse of organs, as well as other agencies, play in matters of health and disease, but he did insist that *the structure of the body determines the activities of its parts.* All else may be perfect but if this perfection of structure be lacking, disease results. He furthermore declared that the reparative forces of the body lie within itself, that the body possesses all the facilities for the manufacture of all remedial agencies necessary for its growth and repair.

Upon these principles have we builded our therapy. There are times, however, when it seems to me that as a profession we have become pretty nearly everything but what we profess to be, anatomical engineers.

This conception of the human body and its application to cure of disease not only was thought-provoking, but also was startling in its results. At first its evidences were clinical results supported by a most reasonable and tenable theory. Later these theories were thoroughly tested and proven by scientific laboratory methods.

Members of the so-called "regular" medical profession which has for sixty years ridiculed and derided this idea, not only accept it now, but even acclaim it as their own. One of the leaders of this profession in the East in a recent book‡ declares, "The human body to be at its best must be used with all its parts in proper relationship. Poor health may be found with no diseases of the organs, but it is always associated with faulty alignment of the body . . . The human body should be considered as a machine, and that as such, like any other mechanical contrivance, it is governed by the laws of mechanical stresses and strains . . . The malalignment or faulty mechanics of the human machine is likewise a potential of trouble and it should be recognized by the physician as such." Further perusal of this book shows the author has swallowed the mechanical concept of disease hook, line, and sinker, and presents it to his profession as an original contribution to the healing art.

Again I read in the daily press a report from a high medical authority that the cause of chronic arthritis, rheumatism, is due to poor posture, or a structural abnormality, a mechanical disorder.

Another medical man has gained great notoriety and a corresponding income from applying Dr. Still's principle of cure to the feet alone.

We are challenged in our claim to be the most able to relieve this decade of its actual and potential injuries, and thus make of it not a menace but the promise of a long and useful life.

Members of the osteopathic profession, we are challenged! There are those who would rob us of the chief corner-stone of our therapy. For the sake of those who need our service let us renew our allegiance to the principles that have made us great and which have caused our most implacable antagonist to try to imitate us, and let us carry on as anatomical engineers.

†Still, A. T.: Osteopathy, Research and Practice. The Journal Printing Co., Kirksville, Mo., 1910, preface pp. VI and VII.

‡Goldthwait, Joel E. et al: Body Mechanics. J. B. Lippincott Co., Philadelphia, 1934, pp. 7-9.

617 First National Bank.

Chicago—Convention City for 1937

LOCAL COMMITTEE MEETS

The local convention committee met on December 17 at the Stevens Hotel, to which meeting all members of the Chicago Osteopathic Association were invited. Reports were read by the chairmen of the various divisions of the committee. Drs. R. C. McCaughan, Ray G. Hulburt, and C. N. Clark, all of the Central office, were in attendance and were called upon to give short talks on the various phases of their work in connection with this convention. From these reports and talks, it is evident that a tremendous amount of work already has been done to make the forty-first assembly one of the largest and best in the history of the American Osteopathic Association.

The enthusiasm of those in attendance at this meeting augurs well for an outstanding achievement in the management of a national convention. General Chairman "Chet" Morris is a genial and well-liked "boss." His orders will be carried out with alacrity and efficiency. Everything is being planned carefully and minutely to meet every contingency. This convention, the committee promises, will be run with a smoothness and machine-like precision, the like of which has never been seen before at a national convention.

The comfort of Chicago's guests has come in for a large share of consideration. The main lecture hall, the section rooms, the scientific exhibit, and the commercial exhibit halls have been planned for their easy accessibility. The commodious and beautiful Stevens Hotel, the largest in the world, is well-fitted to cater to the physical needs of the profession. Situated on Michigan Boulevard, across from Grant Park, this hotel is noted for being cool in summer. It is outside of the area of loop congestion and is open on three sides to receive the cooling breezes off of Lake Michigan.

Plan now to attend. Your safety is assured from gang wars—Chicago has cleaned up, and, incidentally, we rarely see an Indian, except out in front of a cigar store. Easterners can come without fear of cowboy lariats and six guns.

R. E. D.

HAVE YOU SOMETHING OF INTEREST TO DISPLAY AT THE SCIENTIFIC EXHIBIT?

Dr. Otterbein Dressler, chairman of the A.O.A. Committee on Scientific Exhibit has put in a call for materials for what he hopes to be the largest and best scientific exhibit ever shown before a national convention. A huge exhibition hall at the Stevens has been planned to house this display. It can be reached easily from the street level or from the main lecture room.

Anyone having anything of scientific interest may be granted space for exhibit if he will correspond directly with Dr. Dressler, stating in detail what he has to exhibit and what its scientific worth is. It is understood that the chairman and his committee, composed of Grover C. Stukey, Kirksville, Mo., Jack Turner Wilson, A.B., Chicago, G. N. Gillum, Kansas City, Mo., Basil K. Woods, Los Angeles, and J. M. Woods, Des Moines, Iowa, reserve the right to choose what shall be exhibited. The exhibitor must pay the expenses of shipping materials to and from the Hotel Stevens in Chicago. Address Dr. Dressler at 48th and Spruce Sts., Philadelphia.

Chicago Convention Committee

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For the meetings planned in connection with the coming convention of the American Osteopathic Association next July, it is well to remember that all reservations for any public space or any meetings of whatever nature, to be held in the Stevens Hotel during the week of the convention or during the preceding week, shall be made through E. W. Reichert, 27 E. Monroe St., Chicago, Chairman of the Facilities Committee of the local convention committee, who is cooperating under definite agreement with this Association and with the headquarters hotel.

No exhibit of a scientific nature may be held without the consent of Otterbein Dressler, Philadelphia College of Osteopathy, Chairman of the Committee on Scientific Exhibit; no exhibit of a commercial nature without the consent of C. N. Clark, 540 N. Michigan Ave., Chicago, Business Manager of the American Osteopathic Association; no demonstration before physicians or lay people, either in a public space or in private rooms of the hotel, during this period, without the consent of Fred M. Still, Macon, Mo., Chairman of the Bureau of Convention Program, and in any of these cases, without assignment of space by Dr. Reichert.

These regulations will be strictly enforced.

WHERE OUR STUDENTS COME FROM

Asa Willard, D.O.
Missoula, Mont.

This 1936 student listing by states of all students enrolled in the regular four-year professional course in all of our colleges is the tenth such annual listing presented.

The total number of students enrolled on the first day of November for each of those ten years, in the six colleges which are now recognized was as follows:

Year	Number	Year	Number
1927	1,559	1932	1,711
1928	1,546	1933	1,726
1929	1,551	1934	1,841
1930	1,705	1935	1,826
1931	1,750	1936	1,860

It will thus be seen that this year we have the largest total number of students we have had in that ten-year period, and I believe have ever had in osteopathy's history.

This year's total increase of 34 students is due to the substantially increased attendance in four of our colleges, which was sufficient to make up the loss in the other two. Four colleges had a total increase of 114 students, the other two having 80 less than last year. In 1934 Philadelphia inaugurated a one-year preosteopathic course. This year Los Angeles, as per previous announcement, required a preliminary of two years of college work, and Philadelphia will require the same in 1937. Quoting from last year's report: "It will be interesting to note the effect upon matriculation." Philadelphia has 28 less, Los Angeles 52 less this year. The number of students reported by colleges in each of the last ten years will be seen in the following table.

NUMBER OF STUDENTS REPORTED

	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936
Chicago College of Osteopathy	124	131	140	117	101	81	82	92	111	140
Des Moines Still College of Osteopathy	226	237	209	203	197	193	221	227	163	177
Kansas City College of Osteopathy and Surgery	103	109	117	125	140	150	163	181	194	211
Kirksville College of Osteopathy and Surgery	639	598	566	607	594	630	623	718	735	789
Los Angeles College of Osteopathic Physicians and Surgeons	205	217	217	266	298	308	294	279	295	243
Philadelphia College of Osteopathy	262	254	302	387	420	349	343	344	328	300

Missouri sending the largest number of students she has ever sent, for the third year holds the record for the largest number of students sent in proportion to population. She sent 193 students and has a population of 3,629,367, which is one student for every 18,800 people in the state. Vermont ranks second, though she dropped a little this year. She sent a student for every 23,900 population. Maine, next, sent one for every 28,300 of population. Using 120,000,000 as the round number for the population of the U. S. (since we are not using the Census Bureau's present estimates, but the actual count as of 1930), we find that if every state did as well per population as did Missouri, that is, sent one for every 18,800 of her people, we would have over 6,300 students in our colleges, or more than three times the number we have. If all of us sent a student for every 23,900 of our population, as did Vermont, our colleges would have well over 5,000 students, or if we all did as well as Maine and sent one for every 28,300, our colleges would have over 4,200 students—more than twice what we have.

Let the reader figure out how many we would have if all did the same as his own state, by dividing the population of his state by the number of students it has, and then dividing 120,000,000 by the resulting number.

In 1934 Mississippi sent the first student she had sent to any osteopathic college since we began to compile these records. At that time the following was written: "Let us hope that on graduation he will take the gospel back and perhaps cause other students to come from Mississippi and awaken that state, for it has always been true that the states sending goodly quotas of students to our colleges are the ones most alive osteopathically." Seemingly that student, who is still in college, has already exerted an awakening effect or some of the 16 osteopathic physicians in that state have been moved, for this year Mississippi has three students in our colleges. Another totally unexpected showing is from her neighbor, Kentucky, which reports the unprecedented number of 11 students in our colleges. With the lay population increasing in Kentucky, the medical population about holding its own, and the osteopathic population decreasing, as has been the situation for a number of years, and as might be expected under a mixed board, it has looked as though when the fine folks we now have in the blue grass state pass away osteopathy would pass with them. This student increase gives us hope. Eleven students, sent from 2,614,589 people, which is the population of Kentucky according to the last census, is not very many. Little Vermont, far away from any college, with one-eighth as many people sends 15 students. But Kentucky's effort is heartening. No state is osteopathically dead that will send students. California with 207 students sends the largest number, as she has for six years, but she dropped very appreciably this year. Pennsylvania, second with 196, and Missouri with 193, are crowding upon her. Georgia, Michigan, Oklahoma, Pennsylvania, broke all previous records last year and did again this year. Texas and Wisconsin this year send the largest number of students they have ever sent. Iowa with 81 students struck an all-time low, and Massachusetts has on occasion sent twice as many as the 75 which she sends this year.

Nine years ago, in presenting this first list of students by states with comments, in analyzing the factors bearing upon our student attendance and the existence of our colleges from the legislative angle, the following was submitted: "The composite board states—Arizona, Colorado, Indiana, Kentucky, New Jersey, New York, Oregon, Texas, Virginia, Wisconsin, Wyoming and Massachusetts; also Rhode Island, which has a medically dominated . . . osteopathic committee, and which for practical purposes can be listed with them . . . had a combined population (last U. S. census [1920]) of 35,200,954. They sent 333 students to our colleges, or a student for every 105,708 people in those states. The independent board states and Ohio, which has an osteopathic committee of osteopathic physicians, had a combined population (last U. S. census [1920]) of 61,276,697. They sent 1,137 students to our colleges, or a student for every 53,893 people, or just twice as many students per population as did the composite board states."*

This year, nine years later, we find that those same composite or mixed board states named above, with the District of Columbia added which has acquired a composite board since then, have a combined population of 41,744,759 (1930 census) and sent to our colleges 405 students, or one for every 103,000 of their population. The same independent board states named ten years ago, and Ohio (though the osteopathic committee's power in Ohio is now far from what it should be) now have a population of 66,671,469 (1930 census) and sent this year 1,293 students to our college or one for every 51,500 of their population. Thus the independent board states continue to send "just twice as many students per population as do the composite board states."

The vital bearing which this, along with the actual and relative decrease in the osteopathic population in many of these mixed board states and independent board states which have had Basic Science Boards imposed upon them, has had, is most obvious. "We must be independent of organized allopathy in running our schools, in our

*Willard, Asa: Where Our Students Come From. The Forum of Osteopathy, 1928 (Apr.) 2:2.

study courses, and in the regulation of our practice if we would survive as a profession."

The states, provinces, and countries from which the students come and the number from each is indicated in the following:

STATE, PROVINCE OR COUNTRY	Population	Number of Students '27	'28	'29	'30	'31	'32	'33	'34	'35	'36
Ala.	2,646,248	0	0	1	2	2	3	4	5	2	4
Ariz.‡	435,573	2	4	3	3	6	8	6	6	9	6
*Ark.‡	1,854,482	3	3	2	3	3	4	4	2	3	5
*Calif.	5,677,251	187	143	117	153	181	199	217	214	253	207
Colo.	1,035,791	22	24	18	17	15	14	11	15	13	12
*Conn.‡	1,606,903	17	12	15	12	11	7	15	12	12	11
Del.	238,380	7	5	6	7	8	6	7	5	2	2
*Fla.	1,468,211	12	11	11	8	10	11	11	18	16	12
*Ga.	2,908,506	6	4	8	7	10	12	10	9	13	15
*Idaho	445,032	5	5	4	2	0	4	6	6	8	8
†Ill.	7,630,654	107	94	99	111	97	99	92	91	80	90
Ind.	3,238,503	26	28	19	23	19	13	12	15	16	18
*Iowa‡	2,470,939	91	100	94	95	97	100	107	112	91	81
*Kan.	1,880,999	59	74	70	79	84	75	62	70	63	77
Ky.	2,614,589	2	4	3	5	8	4	5	4	4	11
*La.	2,101,593	4	3	0	1	1	1	1	1	1	2
*Me.	797,423	21	23	23	26	28	28	26	32	29	28
*Md.	1,631,526	3	3	1	1	3	3	1	2	2	2
Mass.	4,249,614	119	127	151	74	89	94	97	99	83	75
*Mich.	4,842,325	77	66	73	72	83	80	77	110	111	136
*Minn.‡	2,563,953	33	41	29	24	22	16	16	11	14	20
*Mo.	3,629,367	144	135	122	128	135	164	184	187	185	193
Miss.	2,009,821	0	0	0	0	0	0	0	1	1	3
*Mont.	537,606	23	36	33	38	24	18	14	11	16	17
*Neb.‡	1,377,963	31	33	42	51	51	48	44	48	37	33
*Nev.	91,058	0	0	1	0	0	1	0	0	0	0
N. J.	4,041,334	55	53	56	69	72	77	82	90	88	84
N. H.	465,293	6	7	6	8	3	2	4	6	7	8
N. Y.	12,588,066	103	98	110	128	136	113	108	116	113	102
*N. M.	423,317	2	2	0	0	3	2	2	3	5	3
*N. D.	680,845	15	8	8	5	3	1	2	4	2	5
*N. C.	3,170,276	2	1	2	1	3	6	6	8	9	8
†Ohio	6,646,697	172	161	179	180	159	146	144	145	137	139
*Okla.	2,396,040	10	8	9	10	19	23	27	32	37	45
Ore.‡	953,786	14	20	17	13	11	6	5	10	11	11
*Pa.	9,631,350	133	124	134	143	174	148	144	172	189	196
R. I.	687,497	21	21	30	31	33	34	26	23	16	13
S. C.	1,738,765	0	0	0	0	0	3	1	1	1	1
*S. D.	692,849	8	10	11	15	13	9	9	13	9	9
*Tenn.	2,616,556	5	6	2	4	6	4	3	2	3	5
Tex.	5,824,715	14	17	23	24	20	16	23	25	22	37
*Utah	507,847	0	0	1	1	1	4	4	4	1	0
*Vt.	359,611	14	9	5	2	2	7	13	16	18	15
Va.	2,421,851	2	2	2	2	2	2	2	4	5	4
*Wash.‡	1,563,396	18	16	9	15	8	9	7	9	10	12
*W. Va.	1,729,205	4	3	5	5	7	3	5	4	7	7
Wis.‡	2,939,006	21	17	20	25	23	25	19	21	21	26
Wyo.	225,565	1	2	1	4	4	4	4	3	6	4
D. of C.‡	486,869	1	1	1	2	1	1	1	1	1	2
*H. I.	368,336	2	0	1	2	0	1	0	1	3	2
Canada	10,374,196	22	42	34	41	36	29	27	20	27	35
Sweden	6,162,446	2	3	0	0	0	0	0	0	0	0
Norway	2,814,194	1	1	1	0	0	0	0	0	0	0
Scotland	4,842,554	2	1	1	1	1	2	1	3	3	1
England	37,932,137	6	7	3	12	9	9	10	7	6	10
Japan	66,296,000	3	3	0	2	2	1	0	0	0	0
Australia	6,575,255	1	1	0	0	0	1	0	2	2	2
Mexico	16,404,030	2	2	0	0	0	1	0	1	1	1
Brazil	41,477,827	1	0	0	0	0	0	0	0	0	0
S. Africa	6,929,000	1	0	0	0	0	0	0	0	0	0
P. I.	12,590,369	1	0	0	6	1	1	1	1	1	1
Ireland	2,971,992		1	1	2	2	1	1	0	0	1
Czech.	14,726,158		1		0	0	0	0	0	0	0
Russia	156,168,700		2		3	4	3	0	1	1	0
France	41,834,923				0	0	0	0	0	0	0
Armenia				1	0	0	0	0	0	0	0
New Zealand	1,587,547			1	0	0	0	0	0	0	1
Bermuda I.	27,789			1	0	0	2	1	1	1	1
Venezuela	3,226,000				1	0	0	0	0	0	0
China	474,787,386				2	2	2	0	0	0	0
Colombia	7,851,000				1	0	0	0	0	0	0
Cuba	3,638,174					1	1	0	0	0	0
Germany	65,300,000						2	0	0	0	1
Denmark	3,590,000						1	0	0	0	0
Costa Rica	527,690						1	1	1	1	0
Holland	7,832,175									1	0

* States with Independent Osteopathic Boards.

† Has an osteopathic examiner or a committee of osteopathic physicians.

‡ States with Basic Science Boards.

NOTE—The population of American States is taken from the 1930 census, and of Canadian provinces and other territories within the British Empire from the 1931 census (except South Africa). Other populations are from estimates and censuses made within the last four years.

This student tabulation is made possible through the cooperation of Russel C. Erb of the Philadelphia college; Dean H. G. Swanson and Mrs. Viola Youll of the Kirksville college; Miss Vera E. Potter of the Los Angeles college; Miss Elizabeth Murphy of the Chicago college; Mrs. K. M. Robinson of the Des Moines college, and Dean J. M. Peach of the Kansas City college.

Department of Professional Affairs

A. E. ALLEN
Chairman
Minneapolis

BUREAU OF PROFESSIONAL EDUCATION AND COLLEGES

JOHN E. ROGERS
Chairman
Oshkosh, Wis.

THE RESPONSIBILITY OF THE COLLEGE*

A. D. BECKER, D.O.
Des Moines, Iowa

The osteopathic school of practice had its birth in the osteopathic college and it has had much of its development there. May I say further that those of us who have given much time and thought and energy to the problem of osteopathic education feel keenly the responsibility thus inherited.

The osteopathic school of practice is the tangible outgrowth of the idea of one man, its founder, Dr. Andrew Taylor Still, who established, and for many years directed, the first osteopathic college. It early became apparent that in order to formulate a system of practice which would be sound and comprehensive in scope and sufficient to meet the needs of the physician in general practice, it would be necessary to incorporate certain accepted methods and practices as part and parcel of osteopathic practice and to teach them in the osteopathic curriculum. As a result, surgery, antiseptics, anesthetics, parasiticides, and narcotics were early incorporated and accepted as a part of the osteopathic school of practice. This met with the approval of Dr. Still, although it is my personal opinion that he was somewhat apprehensive that the effect would be to detract from the central theme for osteopathic physicians—that is, the discovery of the lesion and its correction.

With the continued and increasing growth and development of the profession, organizations of various kinds logically were formed: a national organization, various state organizations, and many local organizations. Conventions were held, programs were given, and "many men of many minds" brought ideas to these conventions and expressed them more or less emphatically and eloquently. Personally, I think that all of this is as it should be. No one realized better than Dr. Still the fact that the development of the osteopathic profession and the osteopathic school of practice was logically in the hands of those composing that osteopathic school of practice. His trite and well-known saying, "I have the squirrel by the tail. It is up to you fellows to pull it out of the hole," will forever live as an evidence of his appreciation that the continued development of the osteopathic school of practice was in the hands of its adherents.

With the extension of the osteopathic course from two years to three and from three years to four, and with the logical addition of many correlated subjects to the osteopathic curriculum, there has been a natural and perhaps unavoidable tendency to scatter the attention with the possibility of losing the focal point in our vision. Pressure from outside has been brought upon the osteopathic colleges to incorporate into the curriculum certain methods and practices, some of which perhaps were questionable in their scientific soundness and others of which not only did not lend support to the osteopathic concept, but in certain instances even were diametrically opposed to the fundamental and basic principles of ostopathic practice.

Someone in the osteopathic profession formulated the phrase "unlimited privileges," which has caught the

*Delivered before a meeting of the Associated Colleges of Osteopathy just previous to the Fortieth Annual Convention of the A.O.A. at New York, 1936.

fancy and held the attention of many members of the osteopathic profession. Today, much of legislation is directed, not so much to the protection of osteopathic physicians in the practice of osteopathy and those procedures which have been incorporated as a part of osteopathic practice, as to the securing for osteopathic physicians the unlimited privileges desired by a large group of the profession who are sincere in their belief that that is the logical and proper thing for the profession to seek.

As a result of the demands of these law-seeking groups, pressure on the osteopathic colleges to add to their curricula a full course in materia medica has been great, with the result that more and more during the past twenty years the osteopathic colleges have earnestly sought not only to preserve the tenets of osteopathic practice as early conceived, but also to meet the demands of the considerable group who felt that the osteopathic school of practice should include all known means of therapeutic procedure and that such procedures should be incorporated into the osteopathic curriculum. It is argued that at least we would then be logical in demanding legislation for "unlimited privileges" on an equal basis with the dominant school of practice. There are times when I cannot help wondering whether "unlimited privileges" is not a sophistry which may lead us out into the desert of complete loss of identity as any particular school of practice. Please grant me the privilege of saying that I mention all of this without prejudice, and without being hypercritical, and without assuming to say whether or not it is proper and wise and constructive. I am merely trying to state the proposition as it appears to one individual.

I feel very strongly that there is a heavy responsibility on the colleges persistently and insistently to direct the attention on the part of students to the logic, the scientific soundness, and the wide scope of application of the osteopathic principles in practice.

I am impressed with the fact that it is while the student is in college that he must become adequately informed and thoroughly sold on the value of osteopathic therapeutics as such. This can be accomplished, in my best judgment, only by "precept upon precept, line upon line, here a little and there a little," not only in teaching the course in osteopathic principles, but also in every subject taught in the curriculum. The logic of the osteopathic concept must be carefully brought out and thoroughly impressed. It is my opinion that the clinics in osteopathic colleges should be conducted largely as osteopathic clinics, and if and when adjunctive measures are used, it should be clearly and carefully pointed out and explained that they are adjunctive measures and the reasons, if any, for using them should be set forth. It is very difficult to sell students or young osteopathic physicians completely on the soundness of osteopathic principles as applied in practice until they themselves, as a result of their own personal experience, have had opportunity to see the favorable results from the application of such principles. I am of the opinion that there is good, sound judgment in incorporating into the osteopathic curriculum a course in pharmacology and some knowledge of drugs, if properly presented, but I also call attention at the same time to the fact that an element of danger lies in such incorporation. I do not believe any one of us would have osteopathic physicians believe in osteopathy because they were ignorant of all other systems or methods of therapeutics, but rather we would have them believe in osteopathic therapeutics because, with all of this information as to other methods of therapeutics, they choose osteopathy as being the most scientific, the most useful and the most generally applicable principle of treatment. That, I think, is the high idealism of the colleges today.

I spoke of possible danger in adding to the osteopathic curriculum other methods for purposes of intelligent comparison. Dr. Still at one time said, and I take it for granted that he had just this very problem in mind in saying it, "Our therapeutic house is just large enough for osteopathy and when other methods are brought in, just that much osteopathy must move out." It is a statement which would make any thoughtful person pause and carefully consider. It is my best judgment that upon the osteopathic colleges rests the responsibility of keeping alive and in full flame the torch which has lighted us thus far and to which we must look for light in our continued march in the building of a great profession whose service to humanity is second to none.

Des Moines Still College of Osteopathy.
720-722 Sixth Ave.

BUREAU OF CENSORSHIP

O. M. WALKER
Chairman
Bloomfield, N. J.

The second in this series of articles on the A.O.A. Code of Ethics is written by Dr. Chester D. Losee, Westfield, N. J. Dr. Losee has served two terms as president of the New Jersey Osteopathic Society, and is now serving his second term as president of the Eastern Osteopathic Association.

O. M. W.

THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE

If physicians were all honorable men and women there would be need for neither codes nor contracts. Gentlemen usually act like gentlemen, but sometimes circumstances alter their actions. Two gentlemen attempting to pass through a narrow doorway will both step back with the words, "After you, Doctor." But put those same two men in automobiles and start them for a narrow bridge and each will step on the gas.

There are certain parts of Chapter II, Article I, of our Code which should be clarified a little. Section 6 tells us just what advertising is permissible and what is not. It is considered unethical to place any kind of an advertisement in the classified section of telephone directories. If it is sanctioned by local custom or usages, and not used so as to take unfair advantage of any other individual or group, one may place an advertisement in the local newspaper, in programs, etc., providing this advertisement does not include more than a simple dignified statement by the practitioner, institution or group engaged in general practice, such as name, profession, address, telephone number, office hours. If the doctor is a specialist, he may mention the name of his specialty. He may list the names of the organs, or class of cases, but not the specific diseases treated.

It is quite right to educate the public about osteopathy by the use of proper educational material. Of course there is none better than the OSTEOPATHIC MAGAZINE and OSTEOPATHIC HEALTH which are published by the American Osteopathic Association. But if one wishes to use other literature, or perhaps send out some of his own composition, it must consist of such material as will harmonize with the consensus and best interests of his fellow practitioners in the geographical or specialty group concerned. Such material shall be of the kind associated in the well-informed public mind with proper professional standards and not of such nature as to offend the intelligent friends of osteopathy.

Now let us remember that we are all part and parcel of the profession. We suffer not only for our own acts, but also for the acts of every other doctor in the profession, even though thousands of miles may separate us. If Tom Jones, D.O., in a small town in New Jersey is boastful, undignified or perhaps dissipated, and tops that with a display advertisement in the telephone directory,

people in that community form a pretty poor opinion of the osteopathy that Tom Jones exemplifies. They write to relatives at various places and advise against osteopathy, thinking that osteopathic physicians are all alike. These same people may some day move—possibly to a town with an osteopathic hospital, but there is still that insurmountable barrier. Tom Jones did a poor job but a thorough one, he forgot that gentlemen always act like gentlemen.

We may think our case is different—but it really is not. Let us take stock. Let us go outside our town and cover the county. Do all the really good doctors, dentists, or lawyers advertise in telephone or other directories? They do not, and neither should we. Do they regale friends and acquaintances with stories of their prowess? They do not, and neither should we. Do they belong to their local, state, and national associations? Indeed they do, and so should we.

That is why we have a Code of Ethics. It is an attempt to put on paper the things that will make Tom Jones a better and more respected man in his community.

CHESTER D. LOSEE.

Department of Public Affairs

P. W. GIBSON
Chairman
Winfield, Kans.

BUREAU OF INDUSTRIAL AND INSTITUTIONAL SERVICE

WILLIAM O. KINGSBURY
Chairman
New York City

REPORT ALL CONTRIBUTORY FACTORS IN LOW-BACK CASES

A controversial difficulty under the Workmen's Compensation law is evidenced by one plea for aid received by the Bureau this past month. An official of the employing company definitely ordered a disabled employee to go to a nonosteopathic physician for examination and treatment, stating that unless the employee complied, he would lose further compensation benefits. The medical director of the company in question stated that the disability was a recurrent one, that the workman had received osteopathic manipulative treatment for it on a previous occasion, and that, therefore, it was believed there might exist focal infection which contributed to the disability. To determine this, it would be necessary to investigate the case from the "medical" angle.

It is our duty to convince the public that searching for focal infection is a routine procedure in osteopathic examination and does not require the additional services of a nonosteopathic physician. This Bureau urges that every physician who engages in industrial work carefully examine each patient, make complete records of the findings, and report to insurance companies sufficient information to prove that osteopathic physicians recognize all contributing factors in low-back conditions. Treatment should be administered according to the individual case. If patients are properly examined and treated and complete reports made to all interested parties, this practice will bear much greater weight than articles in journals and in pamphlets or industrial conferences. Executives both of insurance companies and of industrial concerns seem anxious and willing to co-operate whenever it is to their advantage to do so. We believe that favorable attention may be gained for the osteopathic profession through educational literature and conferences, but in the final analysis the records of individual osteopathic physicians handling industrial cases will convince the one who pays.

We wish to call attention to an article in *The Journal of the American Medical Association* for June 6, 1936, on "Freedom of Choice of Physician in Industrial Medicine." Under the New York law, the freedom of choice of a physician has been thoroughly established.

Following in the footsteps of New York, the Missouri Medical Association suggests in its legislative program for this year "4. That a study be made of Missouri Workmen's Compensation law with a view of introducing amendments which might make the law as effective as that adopted by the State of New York and to include the right of free choice of physician."

This Bureau requests that all chairmen of state committees on industrial and institutional service send their full names and addresses to the secretary, Walter E. Bailey, 245 Frisco Building, St. Louis, and a copy to the Central office in Chicago.

WALTER E. BAILEY.

LOW-BACK DISABILITY—DISEASE OR ACCIDENT?

E. P. MALONE, D.O.
Miami, Okla.

The *Journal-Lancet* (Minneapolis) for November 15, 1935, carried an article entitled "Alleged Sacroiliac Strains" by L. J. Stauffer, M.D., in which the author argued that "sacroiliac strain and lumbosacral strain are not accidents within the meaning of the workmen's compensation acts." This paper was presented originally before the meeting of the Great Northern Railway Surgeons' Association, Glacier Park, Mont., July 1, 1935. Dr. Stauffer frankly stated that his purpose is "to advance" the idea which he presents.

His reason for believing that this nonaccident theory should prevail for all cases is as follows: "There is one pathological cause at the bottom of all of them and that is an arthritis, which is chronic in nature." Therefore, the condition is disease and not accident.

In this sweeping statement Dr. Stauffer puts all low-back conditions in the same class, ignoring the fact that young people frequently have injuries of this kind; that many cases which show lipping, spurs, etc. on the x-ray recover with proper treatment with no change in the spurs, and that bony deposits may be present without symptoms or disability.

To show that there are court records in accord with this disease theory, he cites a decision in a hernia case under the Georgia Workmen's Compensation Act in which it was held that:

> Hernia [resulting from] an act done by an employee in the ordinary performance of the duties for which he is employed, when done in a manner not unusual or unexpected . . . does not constitute an injury or accident.

Dr. Stauffer then comments: "the same principle will apply to our alleged industrial accident of sacroiliac strain."

He then cites two back injury cases, one from Oklahoma and the other from Louisiana in which pre-existing disease was shown, but in which an award was made in favor of the injured worker.

In the Oklahoma case the court said in part:

> The fact that an employee is suffering from a diseased condition does not necessarily bar him from the right to compensation in case of injury and disability. An award may be had for disability caused by an injury arising out of and in course of employment, if the injury aggravates an existing disease
>
> Oklahoma Gas and Electric Co. v. Slocum (Okla.), 15 P. (2nd) 29.

In the Louisiana case, a part of the language of the decision is as follows:

> The plaintiff, in the course of his employment, strained a sacroiliac joint. Infection followed this

strain and complications arose in the sacroiliac region, prolonging the disease and aggravating the plaintiff's condition. Ten physicians who testified concurred in the opinion that the plaintiff's condition was worse because he had not received proper treatment immediately after the accident . . .

It is probably true that his continued disability has been contributed to by disease independent of, or possibly connected with, the original injury, causing prolongation of the ailment and slowness of recovery.

However, even if this is true the right to recover compensation will not be unfavorably affected thereby . . . It is sufficient [for recovery under the Employer's Liability Act of Louisiana] if the disability is the result of a condition arising from the injury, or that the injury is a contributory cause of the disability.

Anderson v. Louisiana Oil Refining Corporation. La. 134, So. 343.

One would be perfectly safe in saying that although resistance to payment in these cases, which made a hearing or trial necessary, was intended to save money for the insurance carrier, in the end it was far more expensive than it would have been to provide treatment correctly immediately after the accident.

Dr. Stauffer damns such decisions. He introduces them only to condemn them as horrible examples of justice gone astray. In his opinion the cases in question were chronic arthritis and therefore the insurance carrier should have been absolved from the payment of compensation. He says:

The . . .two decisions leave a condition through which the malingerer can obtain some very easy money. All he has to do is to get a job which entails a little lifting, and some day, with witnesses present, complain of a sudden pain in his back; go to the timekeeper and report that he has strained his back while lifting, and then give the same story to the doctor. If the doctor reports that the man has sustained a sacroiliac strain, it is just too bad for the insurance carrier . . .

Most of the men who have these alleged accidents are men about fifty years of age with a chronic arthritic condition of the sacroiliac joints and vertebrae.

When we examine their mouths, we are likely to find a lot of old toggled-up bridge work, hooked onto dead teeth which have root abscesses; and very often the tonsils are chronically diseased.

X-ray examination will show a chronic arthritic condition of the sacroiliac joints, and the anterior parts of the vertebrae will show the characteristic "lipping."

When these cases come in, I inform them that they have an illness and not an injury within the meaning of the compensation acts.

One wonders whether these patients always accept without question Dr. Stauffer's dictum that the condition is disease rather than accident; or whether they do not often, as in the two cases cited above later, collect awards from the insurance carrier many times larger than the cost of proper treatment would have been at the outset.

Dr. Stauffer presents brief reports of six cases in support of his argument, but in none of them does he say that the x-ray disclosed evidence of the arthritis which he says is universally present. The average age of his six cases is thirty-eight instead of fifty years. Thus they do not seem to strengthen, but rather to modify, his statement that chronic arthritis is "at the bottom of all" low-back disability.

It is not something new, the knowledge that low-back conditions, which cause disability and lost time in industry, are not always the result of accidents. This is one of the twin contentions which insurance carriers have always used in contesting compensation and treatment for back injuries. The other contention is that the claimant is malingering.

The claimant may be a steady worker with a good reputation who has never previously drawn compensation. His disability may date from a definite time when he sustained a fall or other injury, but if he is found to have some suspicious teeth or if his tonsils show evidence of chronic infection, it will be argued that his disability is not the result of an accident, as he claims, but is caused by pre-existing disease. Compensation and treatment may be withheld pending a hearing. Several weeks, or a month or two or more, may elapse before the hearing is held. Meanwhile the injured man may be drifting into a state of chronic disability for lack of attention to an articular lesion which might easily be corrected. Evidence of arthritis, which will be visible in the x-ray picture, may be developing which was not there when the injury occurred.

If no focus of infection is found and there is no evidence of arthritis, and if the disability lasts longer than the healing of a simple muscular strain would take, the aid of the second of this useful pair of twins is invoked and the claimant is accused of malingering. Successful malingering, it is claimed, is possible because of the obscure nature of the back injury and the difficulty of making a positive diagnosis. Dr. Stauffer's contention is that the workers have been quick to recognize this opportunity and to take full advantage of it.

No experienced person, I think, will deny that there is a measure of truth in this. Malingering does exist. It is my belief, however, that malingering at the outset is not at all common; that malingering and exaggeration are largely the product of faulty diagnosis, ineffective treatment and the attitude of insurance workers who contact the injured—this attitude growing naturally out of the errors on the part of the doctors.

If the obscure nature of the back injury creates an opportunity for malingering on the part of workers, it also makes it natural for insurance carriers to raise the suspicion of malingering in cases of genuine injury. It is not meant that this is done deliberately and in the full knowledge that an injury exists. The insurance worker must depend on the doctor for his information in dealing with the case. The doctor is the expert and when he is committed in advance to the belief that every case is one of illness, or that malingering is the rule, and particularly when he is ignorant of the structural derangements, such as the osteopathic physician finds and corrects with such striking results, there is little for the insurance worker to do but to resist payment.

When a hearing is held, the testimony presented is often so contradictory that a decision giving full justice is impossible. In spite of the most liberal award possible, the disabled worker *always* loses a substantial sum in wages and the case costs the insurance carrier far more than it should.

It is doubtful whether insurance carriers can make any more effective use of Dr. Stauffer's illness theory than they have always made. It has always been recognized that low-back disability can be caused by disease as well as by accident. It is probable that the disease factor is always given due consideration when it is positively shown. Many times, for example, an award of compensation will be made for a shorter period than the claimed disability period. Dr. Stauffer's case number 6, that of a patient who claimed nine months disability and who was awarded compensation for a period covering four months, is a case in point. There would be no reason for such fractional awards unless one or the other of the claims of the insurance carrier had been given full weight.

The theory and purpose of the workmen's compensation laws have been well stated in a widely quoted decision of the supreme court of Oklahoma in the following words:

The compensation act was passed for the special benefit of injured workmen. The legislature intended

> the benefits of the act to flow to the injured workmen and their dependents in order to afford them a living and prevent them from becoming public charges. Many provisions are contained in the act in order to accomplish this purpose. The Industrial Commission is the instrument through which the act functions . . . The powers of the commission are to some extent fiduciary . . .

This language places the commissioner definitely on the side of the injured worker. To the extent his powers *are* fiduciary, he stands in the relationship of trustee or guardian of the injured.

The two decisions cited by Dr. Stauffer are in accord with this theory. Before his idea of 100 per cent arthritic disease could become operative in the interest of the insurance carrier, which is plainly what he is proposing, the whole intent and wording of the compensation laws would have to undergo fundamental revision at the hands of the various state legislatures. The trend of the times is not in this direction, but definitely in the direction of more liberal provisions and greater advantages and security for the ailing and injured.

In view of all this, and in view of the fact that chronic focal infection is so often present in the human body and that injured spinal joints are prone to develop arthritis in the presence of this infection, a proper and probably much less expensive attitude would be for the insurance carrier to accept his responsibility, and to provide promptly the best possible treatment for the condition. These cases would then be referred routinely to the osteopathic physician. The treatment of focal infection would go hand in hand with proper attention to the spinal injury and all interested parties would benefit.

LEGAL AND LEGISLATIVE

A. G. CHAPPELL
Jacksonville, Fla.
Legislative Adviser in State Affairs

Arizona Basic Science

The basic science law in Arizona which was adopted by referendum and was in force for three years was voided by the supreme court on June 17 on the grounds of its having been adopted at a special instead of a general election. (Jour. Am. Osteo. Assn. July, 1936, p. 545). The legislature on November 27 adopted another basic science law as an emergency measure to take effect at once. It provides for a board of five members to serve six year terms. They are to be appointed by the board of regents of the state university from among the professors, associate professors, or assistant professors on the faculty. They shall examine on the subjects of gross anatomy, physiology, pathology, chemistry, bacteriology, and hygiene. The examinations are to consist of ten written questions in each subject "of such a nature as to constitute an adequate test as to whether the person so examined has such knowledge of the elementary principles of such basic science as is taught at the University of Arizona in one year's instruction of thirty-six weeks. . ." Appeals from the board's decision may be made to the superior court of any county in the state. Exemption is provided for optometrists, dentists, midwives, and nurses, also those practicing their religious tenets, provided they do not administer drugs or medicine or perform surgical or physical operations. The fee for examination is $20.00. Every person practicing any of the healing arts in the state at the time of passage of the law shall secure a basic science certificate, on the basis of such practice, for a fee of $3.00.

Practice by Corporation in New York

In the case of the People vs. The Life Extension Institute, a judgment was filed in the supreme court of the state of New York on October 24, 1936, by a referee. It was charged that the acts of the defendant corporation have constituted the practice of medicine; that making a physical examination and disclosing its findings to the examinee is diagnosis; that diagnosis itself, though unaccompanied by advice, prescription or treatment, constitutes the practice of medicine in both a medical and a legal sense. Revocation of the Institute's charter was asked for. The Institute contended that it had done only what its charter authorized; that it had not engaged in the practice of medicine; that it had acted in good faith for the prolongation of human lives and the benefit of society, and that if the court decided that any of its acts were in violation of the prohibition against the practice of medicine by corporations, it would discontinue them. It was agreed by the parties to the suit that the Institute will not engage in making physical examinations or make reports and recommendations based thereon; that it will not advertise that it is engaged in making physical examinations or making such reports and recommendations; that it will not employ any physician in its behalf to make such examinations or reports. The right was reserved to the Institute to contract with physicians to provide them offices, laboratory facilities, work or services, financial assistance, clerical and other lay help, files, records, data, statistics or other utilities and services not of a medical character. It reserved the right also to continue, broaden and enlarge its general educational efforts in the interest of life extension and public health.

Wisconsin Chiropractors and Medical Relief

The attorney general of Wisconsin on July 24 passed on the question whether the term "medical relief," in the law requiring a municipality liable for the relief of an indigent to provide "temporary medical relief" when reason therefor exists, includes chiropractic treatment. It was pointed out that it has been held repeatedly that chiropractors are not physicians in Wisconsin. It was pointed out, on the other hand, that the term medicine relates to the science of preserving health and treating disease, whether it involves the use of medical substances or not. "The practice of chiropractic is generally recognized as a healing art designed to repair abnormal states of the body. The laws of this state regulating chiropractic are a part of Chapter 147, entitled, 'Treating the Sick.' Our supreme court . . . stated that for the purposes of that chapter 'their treatment [chiropractors] is medical treatment.'" It was therefore held that for the purpose in question medical relief includes relief given by chiropractors.

More Power to Wisconsin Board

The legislature last winter amended the Wisconsin law in two places. Additions were made as indicated by the words in brackets below:

"Applicants for license to practice medicine and surgery [in addition to having a diploma from a reputable professional college approved and recognized by the board] shall present also satisfactory evidence of having completed a two years' college course in physics, chemistry, biology, and either German or French. . ."

"The board may license without examination a person holding a license to practice medicine and surgery, or osteopathy and surgery, in another state, if in such states the requirements imposed are equivalent to those of this state, upon presentation of the license and a diploma from a reputable professional college [approved and recognized by the board]. . ."

The Medical Witness

Avoid technical terms if possible. If not, explain promptly and simply. To a layman, one hundred and four degrees is a high fever, not a hyperpyrexia; to him an ecchymosis is a bruise. Put yourself on an apparent mental parity with the jury. Speak their language. Nothing will so quickly or so effectively antagonize a jury or render it sublimely indifferent as a learned discourse in a, to it, foreign language.—Philip Work, M.D., *The Diplomate*, 1936 (Nov.) 8:269-272.

National Board of Examiners for Osteopathic Physicians and Surgeons

CHARLES HAZZARD
President
New York

TWO CERTIFICATES AWARDED

The National Board of Examiners for Osteopathic Physicians and Surgeons announces the awarding of certificates to two applicants who passed the final examinations at the time of the New York convention, Dr. Margaret A. Barnes, Chicago, who receives certificate No. 1, and Dr. George S. Rothmeyer, Philadelphia, who receives certificate No. 2.

These applicants, who had already passed Parts I and II of the examination, took Part III, the final test, at that meeting.

Parts I and II of the examination are written, and according to the constitution of the board they shall be given not more than twice yearly at one or more of the recognized colleges of osteopathy. Part I covers the following sugjects: anatomy, including histology and embryology; physiology; physiological chemistry; general pathology; bacteriology, including parasitology and immunology.

Part II covers: surgery, including applied anatomy, surgical pathology and surgical specialties; obstetrics and gynecology; pediatrics; neuropsychiatry and therapeutics; public health, including hygiene and medical jurisprudence; osteopathic theory (principles) and practice.

Part III which, as has been said, was entirely clinical and practical, is in the following subjects: anatomy; physiology; pathology; therapeutics; clinical chemistry, clinical microscopy and dermatology; operative surgery and the surgical specialties of the eye, ear, nose and throat; optometry; obstetrics and gynecology; physical diagnosis; public health, including sanitary bacteriology and the communicable diseases.

Twelve questions are asked in each subject. The first five must be answered and the applicant may select any five out of the remaining seven. The average grade must be at least 75 in all subjects of each part with no single subject lower than 60.

The board announces that the divisional societies in a number of states are working out the necessary provisions for securing recognition of the certificates of the National Board.

At the board meeting in New York, Dr. Charles Hazzard was reelected president of the board, Dr. W. Curtis Brigham, vice president, and Dr. Asa Willard, secretary-treasurer. Other members of the board are: Drs. Edgar O. Holden, T. T. Spence, Margaret Jones, P. W. Gibson, S. V. Robuck, E. A. Ward, A. D. Becker, C. Paul Snyder, Lester A. Daniels, Arthur Taylor, C. D. Swope, and John E. Rogers.

COMING EXAMINATIONS

Examinations in Part I will be held at the various approved schools of osteopathy on January 11 and 12, 1937. Proctors have been appointed to conduct the examinations in each of the schools.

Any person of good moral character who has satisfactorily completed the first two professional years of instruction, or their equivalent, in any college of osteopathy approved by the American Osteopathic Association is eligible to take Part I of the examination. Application blanks may be secured from Asa Willard, Missoula, Montana, secretary-treasurer of the Board.

Schools of Public Health in California

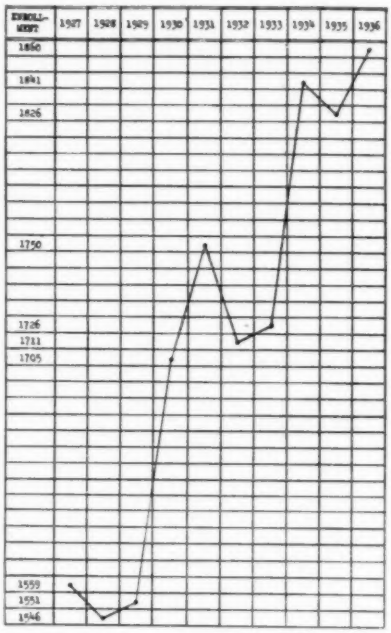
The University of California and Stanford University have organized the Western School of Public Health to assist health departments of western states in the training of public health personnel. Social security funds are used to finance the school and the education of certain public health workers . . . Applicants for the regular work, which may lead to a degree in public health, will be asked to meet definite matriculation requirements and must be within specified age limits.—*The Diplomate*, 1936 (Nov.) 8:272.

COMMITTEE ON VOCATIONAL GUIDANCE

MARY L. HEIST
Chairman
Kitchener, Ont.

ENROLLMENT INCREASING, BUT VERY SLOWLY

The accompanying graph shows the number of students attending osteopathic colleges each year, beginning with 1927. The figures upon which it is based were compiled by Dr. Asa Willard, who is the author of the article entitled "Where Our Students Come From," in this issue of THE JOURNAL.



Graph of College Attendance Beginning with 1927

The graph shows progress, but not enough. When one considers that even at the peak the number of young men and women studying osteopathy is pitifully small, he wonders how the profession has been able to make the remarkable progress which has marked its history.

In the days of sailing vessels, when progress depended upon the wind, ships near the equator would sometimes get into the doldrums. These were places abounding in calms. Has our profession gotten into the doldrums? Is it not time that we turned modern, generated a little steam, and really got going?

There will be students in osteopathic colleges anyway, but greater numbers would enter if we made it our business to tell them of the challenge that osteopathy offers in the service of mankind.

Our goal is "Every osteopathic physician send a student to an osteopathic college each year." The result would be thousands more families vitally interested in osteopathy, thousands more osteopathic physicians going out to demonstrate the excellence of osteopathy, and multiplied colleges and other institutions of osteopathy.

M. L. H.

COMMITTEE ON SPECIAL MEMBERSHIP EFFORT

F. A. GORDON
Chairman
Marshalltown, Iowa

MEMBERSHIP STATUS

It is interesting to note the membership trend in the American Osteopathic Association as measured on the first day of December, from year to year. That is the date when the by-laws require that delinquents be dropped, and it is therefore the low-water mark each year.

As compared with previous years, December 1, 1936, shows a substantial growth. The co-operation of many delegate representatives and individual members

has helped to rescue 25 per cent more from transfer to the nonmember section of the new Directory than were rescued last year. After transferring this smaller number of delinquents, we find not only that the total membership is 12.3 per cent greater than after the deductions last year, but also that there are 13.7 per cent more who are fully paid-up members.

However, increased devotion of all members is solicited, and will be required, if this fiscal year's growth is to equal that of last year. Then the gain from August 1 to December 1 was 9.4 per cent, whereas the corresponding period this year has witnessed a gain of only 5.6 per cent.

As you receive your copy of the new Directory, make note of nonmembers listed there who you have reason to believe should be affiliated with the divisional and national units of our Association. Your friendly personalized interest in their membership status will be a constructive service, appreciated alike by them and by your related organization units. With this small contribution of *time* and *effort* by all present members, our untapped nonmember reserve could be converted into earlier development of research and public relations projects so vital to the progress of the profession

HONOR ROLL

As you interview or write to nonmembers about their state or national obligations, make sure that all membership applications are identified by your endorsement, so that your state secretary, or Central office, may properly credit your valued assistance for Honor Roll. Reports received here to date indicate that *43* doctors in *19* divisional societies have secured *150* A.O.A. and 31 divisional memberships. To all here listed, and countless others working, please be sure that your Association and its units are grateful for contributions of time and effort.

(A = 5 A.O.A. memberships; D = 5 Divisional Society memberships)

Brown, H. Willard—Ill.
Bugbee, W. C.—N. J.
Caldwell, Della—Ia.
Charles, Elmer—Mich.
Chastney, J. E.—N. J.
Childs, W. S.—Kans.
Conley, G. J.—Mo. (AA)
Craft, A. D.—Ia.
Dickey, O. L.—Mo.
Drew, H. A.—Vt.
Dunn, R. K.—Vt.
French, P. O.—Ia. (A) (D)
Gartrell, I. D.—Nebr.
Gordon, F. A.—Ia. (11-A's)
Hannan, D. E.—Ia.
Hitchcock, C. C.—Wis.
Hoselton, N. A.—S. C.
Jones, L. M.—Me.
Jones, Margaret—Mo. (AA)
Knowles, W. T.—Mass.
MacCracken, F. E.—Calif.
MacDonald, J. M.—Vt.
McClimans, W. A.—Ill.
Magoun, H. I.—Colo. (A)
Medaris, W. O.—Ill.
Meredith, O. R.—Idaho
Munger, Zoa—Ia.
O'Meara, L. B.—Calif.
Pierce, Thos.—Mo.
Porter, E. W.—Mo.
Price, J. P.—Okla.
Pugh, S. M.—Wash.
Schwartz, J. P.—Ia. (D)
Simmons, Grace—Mo.
Smith, Hunter—Fla.
Starbuck, M. B.—Calif.
Taylor, A. T.—Ill.
Tete, Henry—La.
Twadell, B. S.—Kans.
Waitley, D. D.—Ill.
Woods, Rachel—Ia.
Woods, John—Ia.
Yowell, O. Y.—Tenn.

Watch Honor Roll grow. Let us have *your* name in next month's report!

MEMBERSHIP GAIN SINCE AUGUST 1

During the four short months since August 1, thirty-six divisional societies have more than neutralized slight membership losses in eight divisional societies, and have increased our net membership by 271, while sixteen other divisional societies were maintaining a par status.

California, Maine, West Virginia, and Utah retain first positions in their respective groups. Particularly well-organized and effective state-wide campaigns are being directed by Dr. F. E. MacCracken, Fresno, Calif., and Dr. Guy Morris, Clarksburg, W. Va. Dr. S. G. Semple, London, gives detailed evidence of his complete coverage effort in England. For effective personal interview effort, the prize of the month goes to Drs. Margaret Jones and George J. Conley, Kansas City, who returned 17 memberships from a few hours of soliciting.

GROUP A
(Societies of 200 or more)

	On Nov. 30 1936
California	12.11
Iowa	9.94
Texas	9.18
New Jersey	8.43
Illinois	7.84
Michigan	7.03
Pennsylvania	5.80
Missouri	4.52
New York	4.39
Massachusetts	3.60
Kansas	.51

GROUP B
(Societies of 100-199)

	On Nov. 30 1936
Maine	13.13
Washington	7.46
Florida	6.97
Colorado	6.25
Minnesota	6.09
Wisconsin	3.37
Oklahoma	2.58
Nebraska	1.38

GROUP C
(Societies of 50-99)

	On Nov. 30 1936
West Virginia	22.22
Oregon	13.88
Montana	10.25
Georgia	8.33
Rhode Island	1.88

GROUP D
(Societies of less than 50)

	On Nov. 30 1936
Utah	50.00
Delaware	42.85
Nevada	33.33
North Dakota	18.18
Wyoming	16.66
New Mexico	12.00
Idaho	11.76
New Hampshire	11.11
Louisana	10.00
Arizona	9.09
District of Columbia	5.26
Vermont	4.34

PAR MEMBERSHIP IN

Tennessee
England
Kentucky
Manitoba
New Brunswick
Philippine Islands
Quebec
South Carolina
Alabama
Saskatchewan
Arkansas
British Columbia
Maryland
Virginia
Alberta
Mississippi

F. A. G.

American Osteopathic Society of Proctology

HAROLD P. FROST
President
Worcester, Mass.

PROCTOLOGY IN GENERAL PRACTICE*

COLLIN BROOKE, D.O.
St. Louis

Every physician who is conducting a general practice should have enough knowledge of the normal and abnormal rectum to be able to make examinations and to diagnose pathological conditions. I shall not make the error, so often made by specialists, of attributing every ailment to the particular field in which I specialize, but I must stress the fact that many aches and pains could be much more readily alleviated if a careful examination of the anorectal tract were made and existing pathology corrected.

Let us review briefly some of the anatomical features of the anus and rectum. The nerve supply is derived from both the autonomic and the spinal systems. We know that when a nerve trunk divides into two or more branches and there is terminal irritation of one branch, the disturbance of impulses and consequent dysfunction is evident in the periphery of all branches originating in the same segment of the cord of the spinal system or the same ganglion of the sympathetic system. Therefore, rectal pathology may produce a simulation of disease in any organs or tissues supplied by sympathetic fibers arising from the solar plexus, the inferior mesenteric or hypogastric ganglia or those supplied by the lower lumbar and upper sacral spinal nerves.

Most of the blood collected by the venous plexuses around the rectum flows directly into the portal vein, and it is easy to understand that inflammatory or infectious processes in the anorectal canal will affect liver function and may eventually cause the development of pathology in that organ. The lymphatics of the anus drain into the superficial inguinal glands and those of the

*Delivered before a meeting of the Sixth District Illinois Osteopathic Association at Decatur, October 7, 1936.

rectum into the anterior sacral chain of glands; swelling of these is often of diagnostic value.

Although we know that a pathologic condition of the anus or rectum may be the primary cause of soft tissue lesions of the back and of pathologic conditions in other parts of the body, we must not lose sight of the other side of the picture. Spinal articular lesions, especially from the sixth thoracic down to the lumbosacral, and sacroiliac lesions, may directly affect the arterial supply and venous drainage of the lowest portion of the intestinal tract. This has been proved many times when a rectum with evident pathology becomes normal after expert osteopathic manipulative treatment. It is also true that diseases of the liver, by causing stasis in the hemorrhoidal veins, will produce painful symptoms in the region of the anus. No examination can be complete in an attempt to locate the primary lesion without consideration of both sides of the picture.

We need not consider the muscular structure of the anorectal canal in this paper, except those muscles which surround the anus and whose attachments form the floor of the pelvis. These muscles, considered together, have been called the second diaphragm. It is necessary for the floor of the pelvis to have normal tone and function. Chronic irritation within the anus will produce a contraction of the muscles of this second diaphragm, and a feeling of uneasiness and illness, and may induce symptoms such as headache, pain in the bladder and prostate, sciatica and a host of others. Many patients diagnosed as suffering from hysteria could be relieved very quickly if sufficient attention were given to the anorectal region.

A thorough examination of the anus cannot be made by simply placing the patient on the table, separating the buttocks and inspecting the external anal region. A normal appearance of the skin surface does not indicate normal conditions higher in the canal. The instruments and other supplies needed for rectal examination in the office of the general practitioner can be bought for about $20.00. It is not necessary to buy a special table; the ordinary osteopathic treatment table is sufficient. A small, low stool, such as is used in a bathroom, will be needed. It should be lightly constructed so that it can be moved easily; it need not have a swivel top. A good light is necessary, but this can be dropped from the ceiling and a half cylindrical reflector made and placed over the light with the long axis pointing the long way of the table. Gloves or finger cots should always be used for the safety not only of the doctor but also of the patient. Finger cots are inexpensive; they are less trouble than gloves and can be discarded after use. A good lubricant must be used and I know of none better than Crisco which can be bought at any grocery. I prefer Crisco to any of the jelly lubricants which can be obtained already packaged or compounded by the druggist. Boric acid may be added as a preservative and it may be colored with mercurochrome, although neither is necessary.

The speculum of choice is the large-size regular Brinkerhoff. I can see no advantage in buying any of the various modifications of the Brinkerhoff for the purpose of examination. A Boehm light can be attached to the Brinkerhoff speculum for less than seven dollars, providing you already have some sort of a current controller. The Boehm light gives a direct brilliant white light which greatly facilitates examination inside the anorectal tract. A short Pratt crypt hook is also needed. It should not have a ball on the end and neither should the end be sharp. It must be small but blunt. A sigmoidoscope is useless unless one has had special training in its use. In fact, it may be worse than useless because of the danger of unnecessary pain and injury. These instruments should not be boiled or heat sterilized, because rapid deterioration will follow this procedure. They should be scrubbed in hot water, immersed in some antiseptic, noncorrosive liquid, such as alcohol or Bard-Parker solution, dried and covered until used again.

Examination may be divided into three stages: inspection of the external skin surface, digital examination of the canal, and examination of the tract with a Brinkerhoff speculum.

We shall make no attempt here to discuss the treatment of anorectal diseases, but shall confine the discussion to examination. I want to stress especially the necessity for proctologic examination in chronic systemic conditions where the basic cause of the symptoms is unknown.

Much has been said and written about the injection of 5 per cent phenol in oil for hemorrhoids. It may be that the general practitioner feels competent to administer injections for internal hemorrhoids but prefers to send his surgical work elsewhere. He should be told that the injection treatment of hemorrhoids is only a very small part of the practice of proctology, that it is only suitable for certain types of hemorrhoids, that it is contraindicated in patients who have extensive pathology, and it will accomplish nothing in patients who have cryptitis, enlarged papillae, fibroids and some other common rectal diseases. I have found no use for ointments and suppositories except for temporary relief. It is often advisable to use a soothing ointment after examination to relieve the soreness which may follow the insertion of the speculum. For this purpose I prefer Nupercaine ointment, put up by Ciba, or a new product, packaged most conveniently, and recently marketed by the Petrolagar Laboratories. Ointments should not be used in cases of pruritus ani.

For examination, the patient is placed on his side, but not in the Sims' position. The buttocks are pulled over to the side of the table where the operator intends to sit; the knees are drawn up a little, and the operator takes a position on a low stool behind the patient. There is no need for either the patient or the doctor to be in an uncomfortable position. The buttocks are separated with both hands and the external surface carefully inspected. Inspection may disclose skin tags, a thrombotic hemorrhoid, a perirectal abscess, fistulous openings, sentinel pile which is the terminus of a fissure, exudation and irritation which is characteristic of pruritus ani. Occasionally inspection of the external orifice may disclose prolapsus recti, a protruding polypoid growth, or large protruding internal hemorrhoids.

Digital examination consists of inserting the gloved or cotted finger, well-lubricated, into the anal canal and sweeping it slowly around the circumference, noting any deviation in the smoothness of the wall. Experience will enable one to do this without causing the patient undue pain. Crisco must be used liberally, at first barely inside the anus with the pad, not the end, of the examining finger. It will then be easy to slip the finger all the way through the anal canal. Note the tension of the sphincter muscles. Butesin crystals may be added to the lubricant, allowing a few minutes for absorption, if the patient complains of pain or soreness. As the finger carefully sweeps around the anal wall, one may note depressions which may be crypts or ulcers, and excresences protruding from the membrane which feel hard and fibrous, perhaps the size of a small wart, which will prove to be enlarged papillae. One must note also the size and consistency of the prostate in the male, and the position of the uterus in the female. Now the finger is pushed farther up in the canal, making a little pressure against the anus, and examination made for constriction in the canal and growths extending from the wall. Much of the pathology can be located during digital examination but the Brinkerhoff will have to be inserted actually to diagnose the condition.

The Brinkerhoff speculum must be well covered with lubricant before it is inserted. The light in the instrument should be attached or turned on before lubrication. It is not necessary to hold the instrument with both hands. If the examiner is sitting on the right side of the table, he should separate the buttocks with the thumb

and fingers of the left hand, holding the Brinkerhoff by the handle of the blade with the right hand. If only the handle of the blade is held, there is no danger of the slide being pushed out while the speculum is being inserted and cutting or pinching the patient. The pressure is in the same direction and against the same resistance as when the slide is put in place in the speculum, and it cannot be pushed out by the patient unless the operator makes pressure on the handle of the body of the instrument. As the speculum enters the anus, it should be pointed toward the umbilicus, and as soon as resistance lessens, indicating that the internal sphincter has been passed by the end of the speculum, the direction is changed to make it point toward the hollow of the sacrum, avoiding pressure on the uterus or prostate through the anterior rectal wall.

The examiner should always sit on the same side of every patient because ambidexterity would have to be developed if he changed sides, and the location of the findings, following the examination, may be easily visualized when a record of the case has to be made. This is especially true if he does not have a nurse with memorandum pad in the room while the examination is being made. I have found it unnecessary to consider the anus as the face of a clock, dividing it into twelve sections. It is much less confusing and sufficiently specific to divide the field into four sections, right and left, anterior and posterior. Four more can be added to these in unusual cases by designating the areas as right and left anterior and right and left posterior, making eight sections of the field, but this is not necessary in the majority of cases.

One should make a habit of examining the same area first in every patient and the other areas in regular order. The large Brinkerhoff must be inserted four times, each time with the slide in a different location, to view the entire wall of the anus. It must be withdrawn and reinserted for each new location and never turned within the canal. With the lighted speculum in place, one should withdraw the slide gently about half its length. It must not be jerked or the patient will jump. Now the speculum is held by the handle of the body, and the blunt Pratt crypt hook gently drawn down the wall of the anus, searching for crypts. The crypt hook is also a handy instrument for separating folds of tissue within the speculum when hemorrhoidal masses fill the slot, and for raising papillae into full view after they have been located. The majority of all rectal diseases are located within the first two inches of the terminus and, as previously stated, examination of the upper rectum and sigmoid flexure should be attempted only after the examiner has had careful training.

Now let us visualize a typical case. Male patient, aged 45 years, gives a history of repeated attacks of lumbago, some pain in the legs at night, constipation and flatulence, with the frequent use of laxatives and purgatives. There has been some periodical interference with micturition. He states that about seven or eight years ago a large hemorrhoid appeared externally; it became so very hard and painful that he was incapacitated for about ten days, staying at home and using an ointment prescribed by Dr. J. The rectal lining now protrudes somewhat at defecation, especially after the use of salines, and he has noticed traces of blood following knife-like pains. The pain subsides in a short time, only to reappear in a few days. A slight itching has been noticed but it is not particularly apparent at night. Examination of the spinal column reveals muscular contraction and rigidity in the lumbar region. There is no swelling of the inguinal or sacral glands. Diastolic blood pressure is normal but systolic is about twenty mm. Hg. low.

Inspection discloses a skin tab on the right side, evidently the remains of a former thrombotic hemorrhoid, and a circular fold of skin in the posterior commissure which, when pulled apart, shows a raw crack in the middle. The skin does not have the typical appearance of pruritus and there are no fistulous openings. We ask the patient to strain as if at stool and some of the rectal mucosa appears in the orifice. We find, with digital examination, that the rectal mucosa feels baggy and lies in folds as the examining finger sweeps around. The sphincter is unusually tight and we have to proceed slowly and carefully before entering the canal. The patient complains of pain at the back of the anus as the finger enters. We can detect two papillae, one right posterior and one left posterior and the patient jumps when the examining finger falls between them. Each of the papillae is about one-half inch in length. The prostate is enlarged but is not hard or nodular. Now we add more Butesin crystals to the lubricant and let the patient rest for a few minutes while the Brinkerhoff is being prepared.

Examination with the Brinkerhoff confirms the findings of the digital examination and adds others. Each time the speculum is inserted and the slide withdrawn we find that the hemorrhoidal tissue almost completely fills the lumen of the scope. We will show this on the examination chart as 6 plus, which is our maximum marking for internal hemorrhoids. On the right side, above the skin tab which we saw during the initial inspection, is a crypt into which the crypt hook falls with ease. The membrane above this crypt looks raw. If it is infected, the patient may be absorbing toxins. Examination of the posterior part of the anus shows a fissure with sentinel pile at the external end and with two papillae, each about one-half inch long, situated one on either side of the upper end. The left side of the anus seems to be normal except for hemorrhoids, but another deep crypt is found in the anterior midline—the probable cause of the prostatitis.

It is useless to believe that the injection treatment will relieve this patient entirely and permanently and we shall assume that the general practitioner of osteopathy, who has been consulted and who made the initial examination, is not anxious to undertake the surgical work which he knows will be necessary. The patient states that for business reasons he is unable to go to another town to see a specialist at this time but we know, if we are to hold the patient, he must have relief at once. How shall the case be handled?

The injection treatment can be started at the time of the initial examination. We inject, as high as is possible, through the Brinkerhoff, 5 cc. of 5 per cent phenol in oil on the right side and 5 cc. on the left. This will tend to hold the membrane up in the canal and the patient will notice that the protrusion at defecation is greatly lessened after only one treatment. The injection can be repeated the following day, a little lower in the canal and a smaller amount, about 2 cc. on each side. On the first day we can also inject, through the skin, in the posterior midline, 3 to 5 cc. of an oil anesthetic, under the fissure, which will give tremendous relief immediately. So much relief in fact that the patient may consider himself cured and not return after the second treatment. This eventuality can be avoided by a definite agreement regarding total fee at the beginning of treatment. If he discontinues treatment at this stage, he will do himself and the operator a grave injustice because his symptoms will return within a short time.

It will also be advisable on the first day to make pH tests as a guide in prescribing a diet. Most of these cases will be found to have an over-acid reaction of both the perspiration and feces. The juice of one or two lemons immediately after arising in the morning will materially aid elimination and reduce acidity. The administration of a tablespoonful of Petrolagar, plain, once a day will soften the stools and make elimination much easier. The patient should discontinue the use of roughage, such as bran, since this tends to make the stools hard and bulky. Divulsion and surgery will have to be done before this patient will get complete relief from all rectal symptoms.

The crypt and tab on the right side, and the papillae posteriorly, must be removed completely. The fissure must be incised deeply from its upper border down through the bed and well out into the skin surface. The sentinel pile must be removed and the anterior crypt excised. Before he is accepted as a good surgical risk, it may be necessary to have analysis of the stools, study of the blood, smears from the rectum and roentgenological studies made.

210 Frisco Bldg.

American Osteopathic Society of Ophthalmology and Otolaryngology

FRED J. COHEN
President
Wichita, Kans.

NASAL OCCLUSION*

C. ALLEN BRINK, A.B., D.O.
Princeton, Ind.

In considering the many ramifications and possibilities which might be included in this subject, one easily gets into deep water. It is the intention of the writer to deal chiefly with conditions which would be encountered by the general practitioner, and not with those which lie essentially in the realm of the specialist.

In discussing conditions which might cause nasal occlusion, it is quite obvious that we cannot confine ourselves to the nose alone, but must include as well the nasopharynx. Perhaps the most frequently encountered cause of nasal obstruction is hypertrophied Luschka's pharyngeal tonsils, recognized as adenoids. These structures are present normally from birth to puberty. At puberty they tend to decrease in size spontaneously and even to disappear. Those which have undergone hypertrophy, however, as a result of infection, often cause considerable trouble by blocking the posterior nares. Every physician is familiar with the usual results produced by adenoids, so that we need not dwell on this phase of the subject. The train of symptoms is in most cases quite characteristic. The disuse of nostrils for their normal function prevents their normal development; the face assumes a pinched and listless character.

Among the more serious consequences of adenoids may be included: (1) a general lowering of vitality resulting from improper oxygenation of the blood, so that the victims become susceptible to acute infectious diseases, such as diphtheria, tonsillitis, bronchitis, etc.; and (2) deafness, which may be due to the encroachment of large adenoids upon the eustachian orifice, whose closure interferes with aural ventilation and drainage.

A very common and often serious source of nasal occlusion is inflammation. Occlusion from this source may be either acute and transitory, or chronic. Inflammation may be in the form of a simple turgescence of the turbinate structures, or of the entire mucous membrane, in which case possibly the chief effect upon the patient may be merely a temporary inconvenience and discomfort. An inflammation which has become chronic may result in actual hypertrophy of the structures involved. This state of affairs may be succeeded by many troublesome, even serious, sequelae, depending upon the location of the inflammation.

If the obstruction be confined to the inferior portion of the nasal passages, involving the lower turbinal body and septum, there may be an impingement of the former against the latter. As far as drainage, ventilation, and respiration are concerned, the condition just mentioned would be of little or no consequence, but unfortunately continued irritation in this region usually results in turgescence and inflammation in adjacent structures.

A common type of pathology in the inferior portion of the nasal passages is a ridge of one or more spurs. Where these are present and the inferior turbinate is hypertrophied, resistance of the tissues to disease at the point of contact is lowered.

As we proceed upward and backward and consider the region of the middle turbinated body, we encounter conditions somewhat different from those just discussed. Here we may have a septal deviation which may press against the middle turbinate enough to block the olfactory fissure and thus interfere with drainage from the ethmoidal and possibly the sphenoidal cells. Certain types of obstruction in this region, such as a bowing of the perpendicular plate of the ethmoid, and also a thickening of the septum in the region of the middle turbinate, will close, or at least almost close, the olfactory fissure with the same results as noted in the preceding condition, viz., interference with drainage from the ethmoidal and sphenoidal cells.

If, as is often the case, the enlargement of the middle turbinate be sufficient to encroach upon the hiatus semilunaris, there may be impairment of ventilation and drainage of frontal, anterior ethmoidal, and maxillary sinuses. A state of affairs such as that just mentioned leads quite obviously to very troublesome and sometimes serious consequences in the form of sinusitis of one or more sinuses. Sinusitis in one or another of its various manifestations is very commonly encountered in general as well as in specialized practice. In a great many cases the condition is brought about by impaired ventilation and drainage of the sinuses involved, as a result of nasal occlusion.

Oftentimes an acute infection will involve the nasal mucosa and the sinuses, as the inflammation within the sinuses continues. The secretions coming from the infected region drain over adjacent mucosa and irritate the latter, causing a swelling. These enlarged structures, usually the turbinates, in turn encroach still more upon the sinuses, impeding drainage and damming up the secretions. Thus is set up a vicious circle, which is often quite difficult to deal with.

Deformities and deviations of the nasal septum constitute a very common cause of nasal occlusion. As a matter of fact this type of anomaly is so commonly found to be the cause of obstruction, that a few years ago about the first thing the rhinologist thought of was submucous resection. A great many such operations were performed with little or no benefit to the patient. In those cases in which the septal deviation is pronounced enough to be responsible for definite symptoms, submucous resections are positively recommended.

Among the conditions which may be directly or indirectly caused by deviations of the septum are: acute rhinitis, chronic turgescent rhinitis which may become hypertrophic, acute and chronic sinusitis and atrophic rhinitis. The mucosa in a nose with a badly deflected septum is highly susceptible to external irritating substances, so much so that dust, smoke, fumes, and atmospheric changes may cause a rapidly developing turgescence which often entirely blocks the breathing passages.

One cause of obstruction which is rather common, and yet quite often remains unrecognized, is the presence of nasal polypi. There are several areas from which a myxoma or nasal polyp may originate, chief of which are the ethmoidal cells, the middle turbinated body, and somewhat less frequently the maxillary, frontal, and sphenoidal sinuses.

To the examiner, the picture presented by nasal polypi is quite characteristic. Usually we find blocking the middle meatus, a mass, grayish in color, semitranslucent, and rather freely movable with an examining probe. The

*Delivered before the annual convention of the Kentucky Association of Osteopathic Physicians and Surgeons at Louisville, October 30, 1936.

tumors may be either single or multiple, although the latter is most frequently the case.

The symptoms produced by nasal polypi are quite often rather complex, depending upon the amount of obstruction and the location. If the growth is pedunculated, the patient has a sensation of having a movable foreign body in the nose. In a great many instances the patient will state quite definitely that as long as he remains erect, breathing through the afflicted side is difficult or impossible, but while lying on the back the breathing passages may be quite clear. The voice is quite characteristic in these cases, being muffled as a result of loss of nasal resonance, and at times there is also a nasal twang in the voice. A serous or mucopurulent discharge is almost always present and quite often the pharynx may be dry. A number of reflex symptoms may also be present, such as cough and dyspnea. The sense of smell may be lost due to closure of the olfactory fissure. Then, too, cases of chronic sinusitis may be traceable directly to lack of drainage resulting from large or numerous nasal polypi.

In conclusion, may I say that while the conditions enumerated in this paper are by no means the sole causes of nasal occlusion, they do represent those most commonly found and are, therefore, of most importance as far as the man in general practice is concerned. The dangers resulting from nasal obstruction may be traceable directly or indirectly to one or the other, or both, of two factors: interference with ventilation and drainage of the respiratory passages and interference with ventilation and drainage of the accessory sinuses.

129 S. Main St.

Case Histories

REMOVAL OF HEMOSTAT LEFT IN PELVIS

J. W. ORMAN, D.O.
Tulsa, Okla.

Patient, female, 38 years of age, presented herself for diagnosis and treatment at the office on November 14, 1936. Her chief complaint was continuous pain in the abdomen, back, and right side, not relieved much by drugs. The pain had no relation to food. Sometimes the pain was better when resting. It was worse on activity. Gradual onset of pain four years ago following an appendectomy.

Roentgenograph showing hemostat in pelvis.

Physical Examination — Eyes, ears, nose, and throat negative except for gingivitis; teeth in bad repair.

Heart and lungs negative.

Blood pressure: systolic 146, diastolic 86.

Abdomen—Right side of lower abdomen hard and tense—too sore to permit much palpation. A large tumor was discovered at the crest of the right ilium. It was hard, firm, and fixed to the underlying tissues.

Posture—A left scoliosis was observed.

Diagnosis: Tentative diagnosis of osteosarcoma was made pending blood, urine, and stool analyses. X-ray of the pelvis was advised. Plate was taken on November 15. It revealed a hemostat in the pelvis, the pointed ends pressing against the crest of the ilium.

Treatment: Operation was advised and consent obtained. Patient was operated on by Dr. John E. Halladay on November 18. The metal was encased in fibrous tissue which made removal difficult. One handle had been eaten away almost completely. An uneventful recovery followed. Pain and disability has ceased. The patient is still under treatment to correct the spinal curvature.

Current Osteopathic Literature

Abstracted by R. E. Duffell, D.O.

OSTEOPATHIC DIGEST
PHILADELPHIA

10: No. 2 (November), 1936

P.C.O. Headlines of 1936.—p. 2.
Faculty Holds Important Meeting—p. 4.
*Scientific Supplement: An Osteopathic Consideration of Certain Factors in Referred Pain. Frederick A. Long, D.O., M.Sc., Philadelphia. —p. 5. A Survey of Cosmetics Relative to Their Toxicity. Russell C. Erb, B.S., M.S., F.A.I.C., Philadelphia.—p. 9.
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An Osteopathic Consideration of Certain Factors in Referred Pain

In diagnosis, the ability of a physician to differentiate between pains of visceral origin and those of somatic production is very important. Frederick A. Long, in an article in *Osteopathic Digest* for November, 1936, reviews the mechanisms and physiological processes underlying somatic and visceral sensory phenomena and their relation to certain osteopathic principles and concepts.

He begins by describing the developmental relationship between the somatic and visceral nervous systems. Histologically, the afferent neurons of both systems are indistinguishable. They all enter the cord through the dorsal nerve roots, but the impulses from somatic zones reach conscious level while the majority of impulses from the viscera do not go higher, it is thought, than the thalamic and subthalamic nuclei.

Opinion regarding the existence of actual visceral pain is not uniform. Distention of a hollow organ gives rise to a sensation of fullness. On the basis of clinical observations, it is thought that *actual visceral pain* is associated with increased smooth muscle tension which might and might not be caused by organic disease, while *referred pain* results from inflammation in the wall of the viscus.

The mechanism of referred pain is explained by Head's law. The viscera are areas of low sensibility. Visceral afferent impulses reaching the spinal cord induce there an "irritable focus" resulting in a transference of effects from visceral afferent to somatic afferent neurons (those in synaptic relationship with nerves from body surfaces). The brain does not recognize the visceral origin of these impulses, but places them as coming from a somatic zone (area of high sensibility).

With this introduction, Long takes up the part that altered spinal mechanics plays in the phenomena of referred pain. In a previous paper[1] he presented the ways in which vertebral mechanical disturbances can produce alterations in physiology of the nervous system. It is his opinion that "these alterations are probably set in motion from the irritation attending forced articular motion in abnormal planes."

Long constructs a hypothesis to explain certain sensory manifestations of the spinal lesion as follows:

"Abnormal spinal joint mechanics and the tissue alterations accompanying it produce summation of impulses entering the central nervous system. Certain impulses are concerned with conscious recognition of pain in the involved area and others are concerned with cer-

1. Long, Frederick A.: A Survey of Some of the Mechanisms and Processes Through Which Abnormal Spinal Mechanics Can Produce Local and Remote Effects. Osteopathic Digest, 1936 (May) 1:13-19. Reviewed in Jour. Am. Osteo. Assn., 1936 (Aug.) 35:575.

tain reflex manifestations such as muscle contracture and vascular alterations. The constant passage of impulses through a neuron chain lowers the threshold of the synapses over which they pass. If this is applied to the somatic pathway we see circumstances induced by bombardment of afferent impulses from articular and periarticular areas which could lower afferent thresholds in the central nervous system . . . The spinal lesion can apparently operate in the same manner to lower thresholds. It might well be that under the conditions just cited visceral afferent impulses from normal organs might be adequate to cross to the somatic zone because of lowered thresholds and cause painful responses which would simulate referred pain from visceral inflammation. In this instance the lowered threshold or irritable focus has not been produced as a result of impulses from an inflamed organ, but through alterations induced by somatic afferent impulses from a lesioned or mechanically disturbed spinal area."

With this explanation in mind, Long says that "certain abdominal manifestations which have previously been considered as definitely indicating surgical intervention must be more critically studied from the standpoint of the possibility of their being induced by somatic alterations rather than acute visceral inflammation."

Another way in which spinal lesions can produce referred sensory phenomena which simulate viscerogenic expression is as follows:

"It has been shown that when an area of the skin becomes diseased, the impulses arising from it may be referred to some closely related normal area. Thus, if the skin of one side is diseased, that of the corresponding part of the body on the opposite side segmentally related will express the painful response. This phenomenon is known as allocheiria and it indicates that one somatic zone, if undergoing a pathological reaction, may stand in the same relation to a healthy somatic zone that an inflamed organ stands in relation to the somatic tissues which manifest its referred pain. In other words, a somatic tissue may become an area of low sensibility in relation to some other and normal somatic tissue."

Long next describes the sequence of events leading to the viscerogenic production of secondary spinal lesions. He shows how summation of impulses in the cord from an inflamed organ may break through synaptic resistances existing between visceral afferent and somatic efferent neurons and cause a discharge in the motor neuron. The familiar phenomenon of muscular rigidity (guarding) of the abdominal wall in acute appendicitis is an example. However, muscular response to such stimuli is not confined to the anterior abdominal muscles, but will occur as well in the muscles of the back. The contraction of back muscles, nevertheless, is not anything abnormal, since the function of muscle is to contract. There must be an added factor, then, in the production of osteopathic lesions as a result of visceral disease. Long explains this as follows:

"The spinal muscles must be able to contract and as well relax in response to a host of intricate reflexes having to do with spinal mechanics . . . Under the circumstances bringing about the visceromotor reflex, impulses from the inflamed organ which ordinarily have no business interfering with this somatic adaptive mechanism intrude and disturb its activity. Thus it becomes impossible for the spinal muscles to relax in a manner necessary for normal spinal mechanics. We now have a state of affairs in which even the attempt to carry the involved spinal segments through what should be normal movements produces abnormal effects, for the planes of joint action are disturbed and irritation results."

Once the spinal lesion has been established, it can operate to maintain the sensory phenomena even though the visceral source is removed. Visceral referred pain can therefore be simulated by spinal lesions, for example, the patient who has had a bad appendix removed but continues to have pain.

In some patients visceral disease is known to exist, but the referred pain does not follow the usual segmental pattern. In accounting for this segmental shift, Long says that two explanations may be offered, one involving the phenomenon of allocheiria, mentioned previously, and the other involving the physiology of the synapse.

Allocheiria may account for a variation of a segment or two, but does not explain the greater departures. The physiology of the synapse, Long shows, does offer a solution. The summation of visceral afferent impulses in a patient is sometimes not sufficient to break down the synaptic barriers to the somatic side at the segment where they enter the cord and no referred pain results. If, however, the patient had a previous lesion in a different region of the spine, operating at the time to lower the threshold for stimuli, visceral impulses entering the cord and ascending or descending may strike the lowered threshold at the lesioned level and break through the synaptic barriers. This, then, may explain a visceral lesion in the thoracic region being referred to the lumbar or sacral region as backache.

The whole field of referred pain, Long says, is much more complicated than in the days when all pains were either viscerogenic or somatogenic. The osteopathic school has made some valuable contributions to a better understanding of pain in visceral disease, but much more study is indicated. (See Editorial, p. 235.)

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LONDON, ENG.
3: No. 3 (September), 1936

Notes by the Editor. O. B. Deiter, D.O., London.—p. 144.
What Is a Lesion?" Ray G. Hulburt, D.O., Chicago, U.S.A.—p. 147.
Vitamins. D. H. Wolverson.—p. 148.
Insomnia. G. Irving Evans, D.O., Hull, Eng.—p. 149.
*Tennis Elbow. O. B. Deiter, D.O., London, Eng.—p. 150.
Manipulation as a Specialty. Carter H. Downing, D.O., San Francisco, Calif., U. S. A.—p. 151.
The Arab Way to Health. Louis Katin.—p. 154.

***Tennis Elbow.**—Deiter defines tennis elbow as strain of the humeroradial and radioulnar joints usually following excessive pronation or supination during complete extension of the forearm. He describes the symptoms, diagnosis, mechanism of the elbow joint, and manipulative treatment. The object of treatment, he says, is to reestablish complete flexion, extension and rotation of these joints. The technic is as follows:

Flexion: Place elbow at patient's side. The operator places his thumb or index finger of left hand over the head of the radius, then very firmly and quickly induces complete flexion of the elbow joint.

Extension: To achieve this the patient's elbow is brought to the edge of table and placed in operator's left hand which acts as a fulcrum, the thumb being firmly held over the head of the radius. Operator's right hand grasps the distal end of the arm and bears down with firm pressure. This movement is repeated several times.

Rotation: Patient's arm is now extended laterally, the operator standing with his body close to the axilla of the patient, and with his right hand he grasps the posterior aspect of the elbow, placing the thumb firmly over the head of the radius. Operator's left hand holds the distal part of patient's right arm, creating full pronation and supination, at the same time inducing as much lateral movement as possible in elbow joint.

THE COLLEGE JOURNAL, KANSAS CITY COLLEGE OF OSTEOPATHY AND SURGERY
Kansas City, Mo.
20:257-288 (October), 1936

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Podalic Version. Neiland H. Hines, D.O., Kansas City, Mo.—p. 269.

Hospital Opening in November.—p. 272.
*Bronchopneumonia of Infancy. C. A. King, D.O.—p. 274.
Mycotic Infections of the Skin. Annie R. Hedges, D.O., Kansas City, Mo.—p. 278.
Ectopic Pregnancy. Margaret Jones, D.O., Kansas City, Mo.—p. 280.
Professional Development. G. N. Gillum, D.O., Kansas City, Mo.—p. 282.
The Place of Prenatal Care in Obstetrics. L. W. Linder, D.O., Kansas City, Mo.—p. 284.

Bronchopneumonia of Infancy.—King describes two forms of bronchopneumonia in infancy—the mild and the severe. In the former, fine moist rales are heard throughout the entire chest. The child may appear quite ill, but respirations are not labored. Coughing and fever are common. The general course is brief, the usual duration is from 4 to 7 days.

In the severe type, large areas of lung tissue are rendered functionless. Moderate cyanosis is always present. Breathing is labored. Abdominal distention and muscular weakness are common. Outstanding symptoms are tachycardia, hyperpnea, high fever and cough.

King says that a favorable prognosis can often be made even though dyspnea and gastrointestinal symptoms are profound, provided the patient is under osteopathic care. Manipulative treatment should be directed first to the correction of circulatory and nervous disturbances of the chest. Upper thoracic and cervical normalization will favorably influence the disturbances. However, lesion correction is not important in the early care, as forced manipulation may traumatize an already hypertensed area and set up added reflex muscular contractions in the bronchial tree. Treatment of a relaxing character to spinal soft tissues, attempting to put the spinal segments through their normal range of motion, lifting the ribs, and applying the so-called lymphatic pump treatment are measures of value in this disease.

Current Medical Literature

Abstracted by R. E. Duffell, D.O.

Reducing a Dislocated Elbow

A method of four-direction traction for reducing all types of dislocation of the elbow is described by Edward H. Crosby in *The Journal of Bone and Joint Surgery* for October, 1936, as follows:

"The patient is placed on a stretcher with a folded sheet around the chest. The sheet is then tied or pinned to a crossbar on the opposite side of the stretcher. This fixes the chest and gives countertraction. A four-inch muslin bandage, long enough to reach to the floor, is then placed around the arm above the elbow. This bandage is tied so that it forms a loop, the lower end of which is about six inches above the floor. The foot is placed in this loop for traction downward. A similar bandage is placed around the forearm with the elbow flexed at 90 degrees and is tied behind the operator. This gives traction laterally. The patient's wrist is grasped with the operator's left hand, and the operator's right hand is free to manipulate the elbow joint.

"The patient is anesthetized, and, when muscle relaxation has been reached, the operator gives traction in four directions by leaning backward, by pressing downward with the foot through the loop in the bandage, by pulling upward with the left hand, and with countertraction across the chest."

In this method the dislocation in the elbow joint is easily reduced by one operator with a minimum of injury to the joint.

Neuralgias and Ear Symptoms from Disturbed Function of Temporomandibular Joint

Two years ago James B. Costen[1] reported that certain ear symptoms such as impaired hearing, stopping or "stuffy" sensation in the ears (marked about meal time), tinnitus, dull or "drawing" pain within the ears, and dizziness with nystagmus may be present in patients with edentulous mouths. In other patients, mostly between 50 and 60 years of age, pain and irritative symptoms such as headache about the vertex behind the ears, burning sensation in the tongue and side of the nose, dry mouth, occasional herpes of the external ear canal and buccal mucosa accompanied malocclusion teeth, either natural or acquired. This investigator traced the symptoms back to the temporomandibular joint. He says, "It is not surprising when molar teeth are missing or the vertical dimension of the jaw is abnormally reduced by shrinkage of the alveolar ridge beneath plates or by grinding away of the natural teeth, that the mandibular joint should assume an unaccustomed burden from this district and much of its structure destroyed. When this occurs some of the force is thrown into the incisor region, but most of it is referred upward to the mandibular joint in direct line of the vertical dimension of the jaw. Proper regard for this function is the basis for testing the patient for the mandibular joint 'syndrome' and is the basis on which the dentist proceeds to restore the position of the jaw."

The anatomic reasons advanced for the pain are "(1) erosion of the bone of the glenoid or mandibular fossa, and impaction of the condyles against the thin bone separating them from the dura; (2) irritation by the uncontrolled movement of the condyles backward or mesially, of the auriculotemporal nerve, which passes intimate to the mesial side of the capsule between the condyle and the tympanic plate to distribute over the temporal and vertex region; (3) production of reflex pain and sensory disturbance in the various connections of the chorda tympani nerve, the condyle irritating it where it emerges from the tympanic plate at the mesial edge of the glenoid fossa through the petrotympanic fissure."

In the *Journal of the American Medical Association* for July 25, 1936, the author reports on about 125 additional cases of headache and ear symptoms traceable to the temporomandibular joint. In this series eighty-five cases fell into the pain group, and these included the ones (22) with burning and sensory disturbance about the tongue and pharynx. Forty-two presented ear symptoms, the majority having headache in addition to deafness, tinnitus or dizziness. X-ray plates were taken with the mouth closed and opened. Erosion of the head of the condyle on its anterior face, and to a less extent of the articular eminence, was the usual finding. Evidence was noted also of fibrosis of capsule structures and of wide excursion of the condyle forward when the joint was greatly loosened.

The treatment advocated by the author is the replacement of adequate molar support on the affected side by the use of an overlay on the molar teeth. In the summary of this article he says: "The results of reposition of the jaws were generally good except in a few cases of malocclusion of natural teeth, presenting great difficulty. However, it was noted that the cases showing the best results were corrected in several stages, slowly increasing the vertical dimension of the jaw. This increase in distance is built into the molar district of the jaw and is not merely a problem of 'opening the bite.' Some failures to obtain a proper result have been traced to lack of understanding of this joint and the anatomic problem involved by the dentist."

1. Costen, J. B.: A Syndrome of Ear and Sinus Symptoms Dependent upon Disturbed Function of the Temporomandibular Joint. Ann. Otol., Rhin. & Laryng., 1934 (Mar.) 43:1.

Book Notices

THE THEORY OF OSTEOPATHY: By Ernest E. Tucker, D.O., and Perrin T. Wilson, D.O. Cloth. Pp. 96. Price, $1.25. Published by the Authors. The Journal Printing Co., Kirksville, Mo., 1936.

This book was reviewed in THE JOURNAL for December, page 191. The price of the book was given erroneously as $1.50.

THIS THY BODY: AN EXPERIENCE IN OSTEOPATHY. By Mrs. Cecil Chesterton. Cloth, Pp. 160. Price, 3 S. 6 d. net. Published by Stanley Paul & Co., Ltd., Paternoster House, London, E.C. 4, England, 1936.

Following the Spanish War, Theodore Roosevelt wrote a book, "The Rough Riders." "Dooley," one of the characters in Finley Peter Dunne's well-known syndicate of that day remarked: "If I was him, I'd call th' book 'Alone in Cubia.'"

The present little book pictures one single individual as being largely responsible for bringing osteopathy to the British Isles, for fighting single handed to keep it on the map, for developing it to its present state, and for planning, initiating, managing and commanding its legislative attempts. We are, in fact, given to understand that the recent ill-starred bill in the House of Lords was in the same form in which this champion had presented osteopathy's legislative program every time it had been in parliament previously. We are told also that the hero of the book would have put it through this time except for the poor showing made by one single witness who appeared for the osteopathic group.

Certain chapters, while reading like history, are actually in the form of a historical novel, with some of its characters grotesquely misplaced. For instance, Dr. Still is made to appear as a New Englander instead of a Virginian; descended from Mayflower Pilgrims, instead of Scotch-Irish ancestors, and as being inordinately proud of his Yankee ancestry.

The book upholds the point of view of so many across the water today, that the thing of greatest value to osteopathy will be an understanding and acceptance of its principles and practice on the part of the allopaths—even though so many pages are taken up in showing how inefficient and bigotted the latter are.

"Osteopaths" and "doctors" are contrasted throughout the book and the idea kept in the foreground that osteopathy is a specialty—absolutely drugless and bloodless. In fact this is carried to the point of incorrectly naming the Kirksville College of Osteopathy [and Surgery]—seemingly in the fear that the word surgery would in some way compromise the profession.

MY PHILOSOPHY: Writings and Sayings of David L. Clark, D.O. Mimeographed booklet put out by Dr. H. I. Magoun in December, 1936. Price, $.75.

A collection of the writings and sayings of the late D. L. Clark of Denver has been prepared and mimeographed by Dr. Harold I. Magoun who knew him so well. There is a picture of Dr. Clark, a collection of his verse and his prose sketches, the memorial address at Dr. Clark's funeral and a brief account of his life. Friends of Dr. Clark who want copies are asked to send Dr. Magoun seventy-five cents which just about covers the cost of production.

DIAGNOSTIC ROENTGENOLOGY. By Ross Golden, M.D., Editor, Professor of Radiology, the College of Physicians and Surgeons, Columbia University; Director of the Department of Radiology, Presbyterian Hospital, New York. Cloth. Pp. 863, loose leaf with illustrations. Price, $20.00. Thomas Nelson & Sons, 381 Fourth Ave., New York, 1936.

This is a splendid book containing 11 chapters prepared by Dr. Golden and 14 other able authorities.

The author stresses the importance of close understanding and co-operation between clinician and roentgenologist, showing the value of a frank discussion of specific clinical problems and the fact that either of them may have to modify or discard his views.

The various chapters deal with the skull and intracranial contents; the paranasal sinuses and the mastoids; the chest; the cardiovascular system; the digestive tract; diseases of bones; spinal cord tumors; diseases of the urinary tract; uterotubography; obstetrics, and fractures. Drawings and plates are very numerous.

National Board

Examinations in Part I will be held at the various approved schools of osteopathy on January 11 and 12, 1937. Application blanks may be secured from Asa Willard, Missoula, Montana, secretary-treasurer of the Board. See page 246 for further particulars.

State Boards

District of Columbia

Examinations will be held beginning on January 11. Every applicant for examination must have first passed the basic science board examination.

Florida

The next examination will be held on February 25-27, at Miami. The completed application must be in the hands of the secretary, Ralph B. Ferguson, First National Bank Building, Miami, at least thirty days prior to the date of the examination.

Idaho

L. D. Anderson, Boise, is president of the Idaho Osteopathic Examining Board and Andrew McCauley, Idaho Falls, is secretary. H. B. Catron, Payette, is the third member.

Illinois

Oliver C. Foreman, 58 E. Washington Street, Chicago, reports that the Illinois State Board examinations will be held on January 26, 27, and 28, in Chicago.

Iowa

The Iowa Board of Examiners in the Basic Sciences will conduct a written examination at the State Capitol, Des Moines, January 14 at 9:00 a.m. Address E. A. Benbrook, Secretary, Iowa Basic Science Board, c/o Iowa State College, Ames.

The next examination before the Iowa State Board of Osteopathic Examiners will be held at Des Moines on January 25, 26, and 27. For applications and other information address D. E. Hannan, secretary, 202 B. & M. Building, Perry.

Kansas

The next meeting of the Kansas State Board of Osteopathic Examination and Registration will begin on February 18, at Topeka. Address F. M. Godfrey, 831 Kansas Avenue, Topeka.

Louisiana

Paul W. Geddes, Shreveport, Henry Tete, New Orleans, and Coyt Moore, Baton Rouge, were reelected, president, secretary, and treasurer, respectively, of the Louisiana State Board of Osteopaths.

Michigan

The next examination will be held on February 2, 3, and 4, at Lansing. Make application to F. Hoyt Taylor, secretary of the Michigan State Board of Osteopathic Registration and Examination, 1703 Olds Tower, Lansing.

Nebraska

Charles Hartner, Madison, has been appointed to the Nebraska Osteopathic Board of Examiners for a three year term, ending November 20, 1939. The following are the present officers: President, Harold Fenner, North Platte; vice president, Dr. Hartner; secretary, Charles Blanchard, Lincoln.

South Dakota

The next examination of the South Dakota Board of Osteopathic Examiners will be held at Huron on February 3 and 4. For further information write to the secretary, C. Rebekka Strom, 321 S. Phillips Avenue, Sioux Falls. All applications must be filed not later than January 20.

Vermont

The next examination of the Vermont Board of Osteopathic Examination and Registration will be held at Montpelier, January 28 and 29. Application forms may be secured from the secretary, R. L. Martin, 24 Elm Street, Montpelier.

West Virginia

The next meeting of the West Virginia Board of Osteopathy will be held on February 15 and 16, at Huntington. Application blanks may be secured from the secretary, Guy E. Morris, 542 Empire Bank Building, Clarksburg, and should be filed with him not later than February 8.

Conventions and Meetings

Announcements

American Osteopathic Association, Forty-First Annual Convention, Stevens Hotel, Chicago, July 5-10. Program chairman, Fred M. Still, Macon, Mo.

California midyear meeting (northern and southern sections) San Jose, February 11-13.

Florida state convention, St. Petersburg, May 6-8. Program chairman, James A. Stinson, St. Petersburg.

Georgia state convention, Valdosta, June. Program chairman, Matt W. Henderson, Atlanta.

Iowa state convention, Hotel Savery, Des Moines, May 5 and 6. Program chairman, Laura Miller, Adel.

Indiana state convention, South Bend.

Kansas state convention, Dodge City, October 12-14. Program chairman, Frank W. Shaffer, Salina.

Kentucky state convention, Louisville.

Minnesota state convention, St. Paul, May 7, 8. Program chairman, E. S. Powell, St. Paul.

Missouri state convention, Joplin, October. Program chairman, Ottis L. Dickey, Joplin.

Montana state convention, Livingston, September 5. Program chairman, C. W. Dawes, Bozeman.

Nebraska state convention, Lincoln. Program chairman, E. H. Frech, Lincoln.

New England spring convention, Hotel Statler, Boston, April 30 and May 1. Program chairman, Perrin T. Wilson, Cambridge, Mass.

New Hampshire state convention, Portsmouth.

New York state convention, New York City.

North Carolina state convention, Burlington, May 29. Program chairman, G. E. Holt, Burlington.

Ohio state convention, Courtland Hotel, Canton, May 16-18. Program chairman, J. P. Flynn, Alliance.

Oregon midwinter meeting, Portland, January.

Tennessee state convention, Nashville.

Texas state convention, Houston, May. Program chairman, Reginald Platt, Jr., Houston.

Utah state convention, Salt Lake City, June.

Vermont state convention, Bennington. Program chairman, C. O. Gaskell, Rutland.

Virginia state convention, April. Program chairman, F. D. Swope, Alexandria.

West Virginia state convention, Elkins, June. Program chairman, Harry E. McNeish, Elkins.

Official and Affiliated Organizations

CALIFORNIA

Citrus Belt Branch

On November 19 at Ontario, R. A. Galbraith, Riverside, spoke on the recent tour of European clinics, illustrating the talk with motion pictures.

Fresno County Osteopathic Association

The officers were reported in THE JOURNAL for October. The following committee chairmen have been appointed: Membership, L. N. Pearson; publicity, Frank E. MacCracken; convention program, Clarence Rude, all of Fresno.

Glendale Branch

On November 18, Joseph A. Blake, Glendale, spoke on "The Care of Tetanus in the Newborn," and L. C. Morris, Glendale, led the discussion. Benjamin Greenburg, Los Angeles, talked on "The Treatment of Hernia."

Hollywood Osteopathic Luncheon Club

On November 17 Charles E. Atkins, Pasadena, spoke on "Ligaments of the Vertebral Column."

On November 24 W. W. W. Pritchard, Los Angeles, discussed "The Spine and Its Relation to Body Mechanics."

On December 1 Wade H. Morris, Los Angeles, spoke on "Osteopathic Principles." The following officers were elected: President, Glenn D. Blair; vice president, Duane Stonier; secretary, Horace A. Bashor, reelected; treasurer, Walter V. Goodfellow, reelected, all of Los Angeles.

Los Angeles Branch

On December 14 the following program was presented: "Coming Legislative Problems," Glen D. Cayler; case report, L. B. O'Meara; "Some Treacherous Modern Drugs," L. C. Chandler, all of Los Angeles.

Osteopathic Surgical Society of Los Angeles

On December 7, H. B. K. Willis, Los Angeles, spoke on "The Right Lower Quadrant"; Ross B. Thompson, Los Angeles, on "The Therapeutic Use of Radium"; and Ray D. Walker, of Los Angeles, "Administration of Fluids Following Surgery."

Pasadena Branch

On December 17 a Christmas party was held.

Pomona Osteopathic Luncheon Club

On November 10 L. B. O'Meara, Los Angeles, discussed "Head Injuries and Osteopathy."

San Jose Branch

On December 5 D. H. Wells, Los Gatos, spoke on "Arthritis," and Grant Phillips, Pasadena, led the discussion.

Southwest Osteopathic Luncheon Club

This group was organized on October 14 and is made up of osteopathic physicians in the southwestern Los Angeles area. Meetings are held at 12:15 p.m., the second and fourth Wednesdays of each month at Scully's Cafe, West 48th Street and Crenshaw Boulevard. Following lunch, a speaker is heard. The meetings are adjourned promptly at 1:30. All members of the profession are invited to attend.

FLORIDA

Central Florida Osteopathic Association

An organization meeting was held on December 12 at Leesburg. James A. Stinson, Hunter R. Smith, and J. B. Cahill, all of St. Petersburg, lectured on, and demonstrated osteopathic technic.

Pinellas County Osteopathic Society

The following officers were elected on November 18: President, J. B. Cahill; vice president, Earl E. Osborn; secretary-treasurer, Thomas F. Gagen, Jr., all of St. Petersburg.

At a dinner meeting on December 2, Mr. Joseph Frohock, international chairman of the agricultural committee of the Kiwanis Club, spoke on "Twenty-One Years With Osteopathy."

Luncheon meetings are held every Monday noon at the Spanish Village in St. Petersburg. All visiting osteopathic physicians are invited.

Volusia County Osteopathic Association

On November 4 H. J. Dorrance, Pittsburgh, Pa., was the principal speaker.

GEORGIA

South Georgia Osteopathic Association

On November 12 at Tifton the following scientific program was presented: "Pneumonia," F. E. Keefer, Fitzgerald; "Proctology," Matt Henderson, Atlanta; "Osteopathy," Frank F. Jones, Macon; "Endocrinology," H. B. Felder, Tifton.

The following officers were elected: President, W. C. Holloway, Thomasville; vice president, C. M. Blanton, Waycross; secretary-treasurer, Dr. Blanton.

The next meeting is scheduled to be held on April 1 at Thomasville.

IDAHO

State Association

At the midwinter meeting held on November 21 at Twin Falls, the following program was presented: "Differential Eye Infection," Andrew McCauley, Idaho Falls; "Hyperplastic Injections," W. S. Warner, Idaho Falls; a course in rhinology, E. S. Leach, M.D., Junction City, Kans.; "Legislation," R. E. Cochran, Boise.

ILLINOIS

State Association

On November 29 a legislative meeting was held at Bloomington.

Chicago Osteopathic Association

On December 3 George M. Laughlin, Kirksville, spoke on "Osteopathic Education."

Chicago—North Shore Osteopathic Society

On December 18 R. R. Reder, Chicago, spoke on "Short Wave Treatment of Disease."

Chicago—West Suburban Osteopathic Society

On November 21 at Chicago, H. L. Collins, Chicago, spoke on gynecology.

Illinois Valley Osteopathic Society

On December 3 R. C. Slater, Ottawa, spoke on "The Clinical Aspects of Colloidal Chemistry."

Fourth District Illinois Osteopathic Association

The following officers were elected on October 8: President, J. Gerald Barker, Morton; secretary-treasurer, H. N. Leonard, Fairbury. C. E. Cryer, El Paso, is program chairman.

INDIANA

Northeastern Indiana Osteopathic Association

On November 11 at Fort Wayne, Dale G. Treadwell, Auburn, spoke on "Relation Between Influenza and Streptococcic Infection."

On December 9 Wesley Warner, Fort Wayne, reviewed the Book "Backache," by James Mennell; V. B. Wolfe,, Walkerton, discussed legislative problems, and J. E. Carter, Fort Wayne, demonstrated foot technic.

Northern Indiana Osteopathic Association

(See also Southwestern Michigan Osteopathic Association)

On November 25 at South Bend, R. A. Palmer, Ottawa, Ill., spoke on "Artificial Fever," and R. C. Slater. Ottawa, on "Intestinal Intoxication With Relation to Chronic Disease."

First District Indiana Osteopathic Association

On November 18 at Bloomington, Fred L. Swope, Richmond, spoke on "Examination - Diagnosis in Acute Diseases." V. B. Wolfe, Walkerton, spoke on organization plans.

On December 9 at Indianapolis Stanley G. Bandeen, Louisville, Ky., was the principal speaker.

Second District Indiana Osteopathic Association

On November 20 a round table discussion on the osteopathic treatment of the common cold was conducted.

The following officers were elected: C. M. Eccles, Connersville; secretary-treasurer, R. D. Rogers, Newcastle.

IOWA

Linn County Society of Osteopathic Physicians and Surgeons

Paul O. French, Cedar Rapids, has been appointed publicity chairman.

On November 19 at Cedar Rapids, motion pictures on "Allergy," and "Diseases of Children," were shown. A round table discussion on acute infectious diseases was conducted, discussions being led by Zoa May Munger, Hulda F. Rice, H. L. Hinton, and B. H. Rice, all of Cedar Rapids.

Fifth District Iowa Osteopathic Association

On December 10 the following officers were elected: President, John Hirschman, Cherokee; vice president, A. M. McBurney, Mapleton; secretary-treasurer, Sara A. Miller, Sibley. Committee chairmen have been appointed as follows: Student recruiting, Rex Martin, Onawa; publicity, W. C. Gordon, Sioux City; statistics, Alice R. Paulsen, LeMars; legislation, R. B. Gilmour, Sioux City.

KANSAS

Arkansas Valley Society of Osteopathic Physicians and Surgeons

On November 23 at Larned, several committee reports were given and tentative plans made for an athletic coach clinic.

Central Kansas Association of Osteopathic Physicians and Surgeons

On November 19 at McPherson, Ray E. McFarland, Wichita, spoke on "Endocrinology," illustrating the talk with lantern slides.

Eastern Kansas Osteopathic Association

On November 18 at Iola, a joint meeting was held with the Verdigris Valley Osteopathic Association. H. V. Halladay, Des Moines, spoke on "Prevention and Aftercare of Athletic Injuries." Athletic coaches were present.

The next meeting is scheduled to be held at Garnett.

North East Kansas Osteopathic Association

On December 2 at Hiawatha, E. D. Holmes, St. Joseph, Mo., spoke on "Trends Toward Osteopathy in Allopathic Literature," and O. G. Weed, St. Joseph, Mo., on "A Tour of European Clinics."

South Central Kansas Osteopathic Society

On November 19 at Arkansas City, Robert Buchele, Howard, was elected vice president. J. C. Logsdon, Cedarvale, read a paper on "The Care of the Newborn Infant" and A. L. Quest, Augusta, on "Some Common Cardiac Disorders and Their Treatment." Members and their wives of the Kay County (Okla.) Osteopathic Association were guests.

Southern Kansas Osteopathic Association

On November 10 at Kiowa, motion pictures were shown on the nonsurgical treatment of rupture. J. B. Donley, Kingman, read a paper on this subject and Floyd L. Barr, Arkansas City, on "The Office Treatment of Rectal Diseases."

On December 8 at Wellington, Charles E. Mitchell, Kiowa, spoke on "Goiter—and Its Relation to General Health."

The officers were reported in THE JOURNAL for November. The following committee chairmen have been appointed: Membership, C. C. Matheny, Anthony; professional education, Burr Lacey, Pretty Prairie; hospitals, W. H. Youle, Wellington; censorship, F. D. DeOgny, Norwich; student recruiting, F. M. Stromberg, Cunningham; public health and education, C. A. Kinkaid, Oxford; industrial and institutional service, Floyd L. Barr, Arkansas City; clinics, J. B. Donley, Kingman; publicity, Dr. Mitchell; convention program, Dr. Donley; legislation, K. A. Bush, Harper.

Southwestern Kansas Society of Osteopathic Physicians and Surgeons

On December 8 at Garden City, C. M. Noll, Scott City, read an article on "Socialized Medicine," and L. O. Martin, Dodge City, spoke on "Endocrinology."

The following officers were elected: President, Roy A. Leopold, Garden City; vice president, Dr. Noll; secretary-treasurer, O. C. Kappler, Liberal.

Verdigris Valley Osteopathic Association

(See Eastern Kansas Osteopathic Association)

KENTUCKY

Jefferson County Osteopathic Society

On November 13 at Louisville, Charlotte Weaver, Akron, Ohio, was the principal speaker.

MAINE

State Association

On November 21 at Portland, John E. Rogers, Oshkosh, Wis., spoke on "The Progress of Osteopathy."

MASSACHUSETTS

Connecticut Valley Osteopathic Association

A joint meeting with the Worcester District Osteopathic Society was held on November 18 at Springfield. John E. Rogers, Oshkosh, Wis., spoke on "The Progress of Osteopathy."

Essex County Osteopathic Society

On November 23 the following officers were elected: President, E. B. Whiting, Lynn; vice president, W. W. Fessenden, Beverly; secretary, Thomas J. Jeffery, Salem; treasurer, A. Warren Nicosia, Lynn.

Worcester District Osteopathic Society

(See Connecticut Valley Osteopathic Association)

MICHIGAN

Genesee County Osteopathic Association

On December 10 at Flint, T. D. Jamison, Saginaw, lectured on the technic of photographing the inside of the stomach, and A. J. Still, Flint, presented two films, "Instrumental Delivery," and "Uterine Suspension."

Ionia-Montcalm County Association of Osteopathic Physicians and Surgeons

The officers were reported in THE JOURNAL for December. L. D. Benedict, Ionia, has been appointed chairman of the committee on ethics and fee stabilization, and Wm. R. Price, Belding, public relations and education committee chairman.

Kent County Society of Osteopathic Physicians and Surgeons

On December 2 the following officers were elected: President, H. A. MacNaughton; vice president, R. T. Lustig; secretary, Ellen Van Allsburg; treasurer, P. M. Wells, reelected, all of Grand Rapids.

Northeastern Michigan Association of Osteopathic Physicians and Surgeons

On November 10 at Midland, R. T. Lustig, Grand Rapids, spoke on "Fundamentals in Therapeutics."

Southwestern Michigan Osteopathic Association

On November 19 E. S. Stanley, Chicago, spoke on "Skin Diseases."

On December 15 a joint meeting was held with the Northern Indiana Osteopathic Association. The speakers were V. B. Wolfe, Walkerton; G. H. Voyzey, Kalamazoo; L. A. Rausch, South Bend, Ind.; E. E. Weaver, Sturgis; L. P. Ramsdell, La Porte, Ind.

MINNESOTA

Minneapolis Osteopathic Society

The following programs have been presented:

October 7—"Blood Pressure Technic," Ruby Idtse, Minneapolis; "Report of European Tour," Elnora S. Ervin, Minneapolis.

November 4—"Gastric Ulcer," Robert H. Clark; "Foot Technic," A. F. Hulting.

December 2—"Cranial Lesions Following Exodontia," W. G. Sutherland; "Specific Technic," Clifford S. Pollock; "Elliott Treatment," Will Flory, all of Minneapolis.

MISSOURI

State Association

The officers were reported in THE JOURNAL for November. The following committee chairmen have been appointed: Membership, E. H. Owens, Harrisonville; professional education, H. G. Swanson, Kirksville; hospitals, A. B. Wheeler, Carthage; censorship, H. E. Gorrell, Mexico; student recruiting, F. C. Hopkins, Hannibal; public health and education, U. L. Remmert, Springfield; industrial and institutional service, L. S. Larimore, Kansas City; clinics, H. J. McAnnally, Kansas City; publicity, J. C. Button, Macon, and H. E. Litton, Kirksville; statistics, Aurel Foster, St. Joseph; convention program, Ottis L. Dickey, Joplin; convention arrangements, M. S. McCullough, Neosho; legislation, L. B. Lake, Jefferson City; professional development, Herbert Lipman, Kansas City; displays at fairs and expositions, A. B. Cooter, Booneville; public relations, E. J. Gahan, Perryville.

Buchanan County Osteopathic Association

(See Northwest Missouri Osteopathic Association)

Central Missouri Osteopathic Association

On November 19 at Fulton, Earl Laughlin, Jr., Kirksville, spoke on "Medicine and Surgery in Europe."

On December 17 at Columbia, a series of lectures was begun by Alma C. Kinney, Kansas City, on physiology.

North Central Missouri Osteopathic Association

On November 29 at Chillicothe, W. E. Hartsock, St. Joseph, spoke on "Acute Infections of the Throat," and Wallace M. Pearson, Kirksville, on "Osteopathic Principles and the Low-Back Problem."

The next meeting is scheduled to be held at Brookfield in January.

Northeast Missouri Osteopathic Association

On November 12 at Quincy, Ill., the members were guests of osteopathic physicians of that city. Edith Pollock, Quincy, Ill., and Wallace M. Pearson, Kirksville, were guest speakers.

Northwest Missouri Osteopathic Association

A joint meeting was held with the Buchanan County Osteopathic Association on November 24 at St. Joseph. O. T. Weed, St. Joseph, spoke on European clinics which he visited last summer.

Osage Valley Osteopathic Association

The following officers were elected on October 8: President, Leon B. Lake, Jefferson City, reelected; vice president, Myron D. Jones, Brumley; secretary-treasurer, K. D. Atterberry, Camdenton, reelected. The following committee chairmen have been appointed: Membership, P. F. Eckhoff, Versailles; professional education and publicity, Robert E. Murrell, Jefferson City; censorship, J. S. Berkstresser, Eldon; student recruiting, H. Keith Hendrix, Jefferson City; public health and education, Dr. Jones; industrial and institutional service and convention arrangements, Dr. Atterberry; clinics, J. R. Ellison, Eldon; statistics, J. D. McLeod, Jefferson City; convention program, K. J. O'Banion, California; legislation, Dr. Lake; professional development, Donley Gates, Brinktown.

St. Louis Osteopathic Association

On December 15 H. E. Litton, Kirksville, was the principal speaker.

Southeast Missouri Osteopathic Association

On November 8 at Cape Girardeau, F. W. Zuspan, Flat River; H. E. Reuber, Sikeston, and E. J. Gahan, Perryville, reported on the state convention.

On December 13 at Sikeston, the guest speakers were E. H. Owen, Harrisonville; M. M. Fuller, Cape Girardeau, and H. K. Carter, Salem.

Southwest Missouri Osteopathic Association

On November 18 at Webb City, H. G. Swanson, Kirksville, spoke on "Professional Education."

On December 16 at Carthage, round table discussions were conducted.

West Central Missouri Osteopathic Association

On December 10 at Sedalia, L. J. Graham, Kansas City, spoke on "Roadside Emergencies."

The January meeting is scheduled to be held on the 21st at Higginsville.

MONTANA

Southern District Osteopathic Association

A meeting was held on December 2 at Bozeman.

NEBRASKA

Eastern Nebraska Society of Osteopathic Physicians and Surgeons

At an organization meeting held on November 22, the following officers were elected: President, Charles Hartner, Madison; vice president, C. Lloyd Peterson, Beatrice; secretary-treasurer, Mary Jo Don, Lincoln.

The next meeting is scheduled to be held at Lincoln on January 10.

Southwestern Nebraska Osteopathic Society

On November 8 at McCook, general discussions on professional topics were conducted.

On December 13 at North Platte, the following program was presented: "Advantage of Injection vs. Surgical Treatment of Hemorrhoids," J. F. Harding, Holdrege; "Obstetrical Home Delivery," D. O. Brown, Eustis; "Obstetrical Hospital Delivery," H. Chester Sims, Lexington; "Short Wave Therapy," M. T. Boulware, McCook; "Nonsurgical Treatment of Female Gonorrheal Complications," F. S. Bonnell, Trenton; "Elliott Treatment," G. L. Montgomery, McCook; discussion on Drs. Boulware, Bonnell and Montgomery's talks, I. P. Lamb, Palisade; "Local vs. General Anesthesia for Tonsillectomy," D. A. Furman, McCook; "Nonsurgical Treatment of Prostatic Diseases," J. P. Pattin, Arapahoe; "Sparks of Life," Mr. B. Nelson, North Platte; "Mortuary Finding," Mr. M. J. Forbes, North Platte; "Movie Travelogue With Surgery," Harold A. Fenner, North Platte.

NEW JERSEY

Essex County Osteopathic Society

On November 28 at Newark, Jerome M. Watters, Newark, spoke on "Respiratory Neuroses."

The following are the present officers and committee chairmen: President, C. Norton Tillotson, East Orange; vice president, Walter B. Underwood, Montclair; secretary, Richard Feige, East Orange; treasurer, A. W. Brice, Glen Ridge; membership, Norman K. Sewall, Bloomfield; student recruiting, O. M. Walker, Bloomfield; publicity, Walter Miller, Bloomfield; statistics, Harold L. Colburn, Montclair; legislation, Paul P. Smith, Montclair.

Hudson County Osteopathic Association

On December 4 at Ridgefield, David S. Steinbaum, Bayonne, reported on legislation and C. B. Ackley, Union City, spoke on "Vitamins and Their Therapeutic Value."

Monmouth and Ocean Counties Osteopathic Society

On December 9 Macy M. Rudnick, Red Bank, and Ross B. English, Jr., Long Branch, read papers.

NEW YORK

State Society

The officers were reported in THE JOURNAL for November. The following committee chairmen have been appointed: Membership, Edith E. Dovesmith, Niagara Falls; professional education, John L. Brookman, Albany; student recruiting, C. Don Amidon, Rome; industrial and social medicine, Albert W. Bailey, Schenectady; clinics, Tefft T. Bassett, Syracuse; publicity, Helen M. Dunning, New York City; statistics, William T. Dowd, Rome; convention, Eugene R. Kraus, New York City; convention program, William B. Strong, Brooklyn; legislation, H. M. Miller, Utica.

Central New York Osteopathic Society

On December 9 at Syracuse, T. L. Northup, Morristown, N. J., spoke on "Foot Work and Its Relation to General Practice."

Hudson River North Osteopathic Society

On November 14 at Amsterdam, Helen J. Beaty, Schenectady, discussed "Posture and Combination Lesions."

The following officers were elected: President, H. A. Dark, Glens Falls; vice president, Melvin B. Hasbrouck,

Albany; secretary-treasurer, Mary E. Stearns, Saratoga Springs, reelected.

Osteopathic Society of the City of New York

On December 12 L. van H. Gerdine, Philadelphia, spoke on "Prognosis in the More Common Nervous and Mental Diseases."

The next meeting is scheduled to be held on January 16.

Rochester District Osteopathic Society

The officers were reported in THE JOURNAL for December. The following committee chairmen have been appointed: Censorship, board of directors; compensation, Claude M. Bancroft, Canandaigua; publicity, Charles H. Norfleet, Rochester; program, Merritt C. Vaughan, Rochester; public relations, Dr. Norfleet.

Westchester Osteopathic Society

On October 14 at Bronxville, the following committee chairmen were appointed: Program, W. B. Ensinger, Pelham Manor; censorship and investigations, Donald Watt, New Rochelle; membership, Barbara Redding, Larchmont.

On November 11 at Mount Kisco, L. van H. Gerdine, Philadelphia, spoke on "The Early Diagnosis of Nervous and Mental Diseases."

On December 2 at Larchmont, C. B. Hoff, Bronxville, spoke on "Diagnoses of Ear, Nose and Throat Conditions." Discussions were conducted by Dr. Ensinger and H. H. Williams, Bronxville.

OHIO

First (Toledo) District Osteopathic Society

On November 9 C. G. Beckwith, Chicago, spoke on "Posture and Its Effect on Health," illustrating the talk with x-ray films and lantern slides.

Third (Akron) District Osteopathic Society

On December 9 R. A. Sheppard, Cleveland, spoke on "The Acute Abdomen."

Fourth (Columbus or Central) Ohio Osteopathic Society

A meeting was held at Columbus on December 10.

Fifth (Dayton) District Osteopathic Society

On November 13 B. C. Maxwell, Cleveland, spoke on "Mechanics of the Foot and Effects of Foot Strain in the Body."

On December 16, O. E. Harvey, M.D., Lima, spoke on "Modern Treatment of Tuberculosis."

Sixth (Cincinnati) Society of Osteopathic Physicians and Surgeons

On November 12 Charlotte Weaver, Akron, was the guest speaker.

On December 10 J. D. Sheets, Marietta, spoke on "Genitourinary Diseases."

OKLAHOMA

Kay County Osteopathic Association

(See also South Central Kansas Osteopathic Society.)

On November 12 at Tonkawa, motion pictures were shown on obstetrics and surgery.

Oklahoma County Osteopathic Association

On November 19 at Edmond, C. E. Schefold, Oklahoma City, gave a paper on the Schilling blood count. A round table discussion followed.

South-Central District of Oklahoma Osteopathic Association

On November 17 at Lindsay, W. S. Corbin, Chickasha, and W. O. Pool, Wynnewood, read papers, followed by a round table discussion.

The following officers were elected: President, W. J. Rouse, Norman; secretary, A. A. Choquette, Chickasha, reelected.

OREGON

Southern Oregon Osteopathic Society

On November 20 at Medford, the following officers were elected: President, Blaine B. Pruitt, Grants Pass; vice president, George S. Jennings, Medford; secretary-treasurer, W. W. Howard, Medford.

The December meeting was also held at Medford on the 14th.

PENNSYLVANIA

Lancaster County Osteopathic Society

At the November meeting John H. Eimerbrink, Philadelphia, spoke on, and demonstrated pelvic tilt, pelvic twist, and sacroiliac conditions.

Lehigh Valley Osteopathic Association

On November 12 at Reading, H. W. Sterrett, Philadelphia, spoke on "Urological Errors in General Practice."

On December 10 at Allentown, P. H. Brearley, Philadelphia, spoke on "Spinal Mechanics, the Basis of Osteopathic Technic."

The January meeting is scheduled to be held at Allentown.

Philadelphia County Osteopathic Association

On November 19 Chester D. Swope, Washington, D. C., spoke on "Federal Legislation," and George T. Sill, Allentown, Pa., on "Legislative Problems in Pennsylvania."

RHODE ISLAND

State Society

On November 12 various committee reports were made. George A. Bridges, Providence, lectured on "Diseases of the Rectum."

Peter Pelser, Wickford, has been appointed program chairman.

On December 11 at Providence, John A. MacDonald, Boston, spoke on "Structural Deviations as Found in the Normal Adult Spinal Column."

SOUTH DAKOTA

Black Hills Osteopathic Association

On November 1 a meeting was held at Spearfish.

TEXAS

Central Texas Osteopathic Association

On November 21 at Waco, Sam L. Scothorn, Dallas, spoke on "Osteopathic Care of the Feet," Joseph L. Love, Austin, on "The Schilling Method of Blood Analysis," R. E. Morgan, Dallas, and V. A. Kelley, Waco, "Athletes and Acute Injuries," and John T. Elder, San Angelo, "Latest Methods in Treatment of Hernia."

The following officers were elected: President, J. Ellen Gildersleeve, Waco; vice president, H. V. Anderson, Temple; secretary-treasurer, W. E. Stokes, Corsicana.

Panhandle Osteopathic Society

On November 29 at Amarillo, Freeda Lotz-Kellogg, Denver, and Eugene Pellette, Liberal, Kansas, were the speakers.

Southeast Texas Osteopathic Association

On December 5 and 6 at Bay City, Everett Wilson, San Antonio, spoke on association affairs. Several clinical reports were given.

VERMONT

Rutland County Osteopathic Association

Recently C. O. Gaskill, Rutland, spoke on "Nonsurgical Treatment of Hernia," illustrating his talk with motion pictures.

WASHINGTON

Pierce County Osteopathic Society

On December 10 M. R. Kint, Bremerton, discussed legislative affairs.

WEST VIRGINIA

Ohio Valley Osteopathic Association

The following are the present officers: President, R. H. Dunn, Martins Ferry, Ohio; vice president, William C. Rankin, Cadiz, Ohio; secretary, W. W. Clark, Martins Ferry, Ohio; treasurer, Frank D. Dornbush, Steubenville, Ohio.

On December 3 at Bellaire, Ohio, Harry R. Pense, Steubenville, Ohio, spoke on "Short Wave Diathermy."

The January meeting is scheduled to be held on the 7th at Wellsburg. Albert Graham, Wheeling, will be the speaker.

WISCONSIN

Fox River Valley District Society of Osteopathic Physicians and Surgeons

A meeting was held on November 14 at Oshkosh in honor of John E. Rogers, Oshkosh, Wis. A more detailed report is given in THE FORUM for January, p. 227.

Special and Specialty Groups

Osteopathic Clinical Society

On November 8 at Lancaster, Pa., Leo Wagner, Lansdowne, Pa., Otterbein Dressler, Philadelphia, and George T. Sill, Allentown, were the speakers.

On December 13 clinics were held at Doylestown. George T. Hayman, Doylestown, showed a motion picture on "Injection Treatment of Hernia," and Dr. Sill spoke on osteopathy from a political standpoint.

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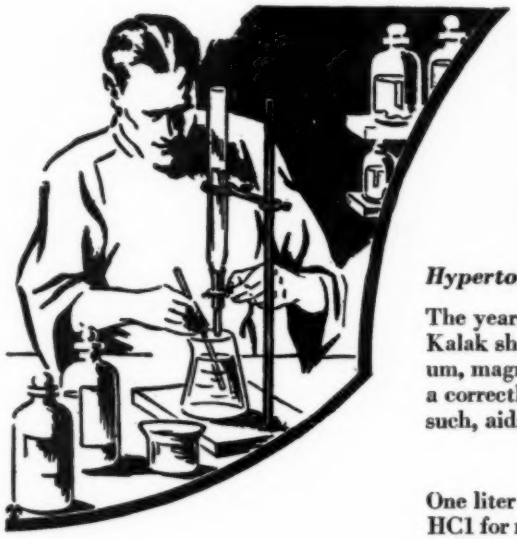

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February Osteopathic Magazine

Osteopathy—the Therapy of Distinction. By Guy E. Loudon, D.O.
An exposition of the principles of osteopathy with special emphasis on the functioning of the autonomic nervous system, and several case reports on which the author bases his claim of distinction for this complete system of healing.

When Danger of Malignancy Whispers. By Margaret H. Jones, D. O.
Dr. Jones, besides emphasizing the necessity of pelvic examination not only for discovering incipient malignancy but for warding off other conditions which might become disabling, shows how the osteopathic physician is especially trained to find and correct pelvic abnormalities.

A Record in Babies.
The story of Dr. O. P. Grow of Queen City, Mo., who has an unusual and interesting record in obstetrical cases. Dr. Grow outlines briefly the advantages of osteopathic care during pregnancy and childbirth.

Swimming for Expectant Mothers. By Howard Wilson.
Mr. Herbert Henrici, director of aquatics at the Tulsa Y.M.C.A., and Dr. John E. Halladay discuss with a reporter the beneficial effects of swimming during pregnancy observed by them in a number of cases.

A Baby Round-Up. By Olga Edith Gunkle.
A description of the Annual Homecoming Baby Clinic of the Rocky Mountain Osteopathic Hospital, which the author calls "one of the most fascinating community health efforts in the country," shows the excellent follow-up service which this institution offers to babies delivered under its own roof and by its staff physicians.

This Business of Painting the Lily. By Russell C. Erb, M.S.
The author, Professor of Chemistry at the Philadelphia College of Osteopathy, discusses the chemical composition and harmful effects of cosmetics on the skin. An article of unusual interest to women.

Osteopathic Health No. 86 (Feb.)

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"Road to Osteopathy," activities in osteopathic colleges	A.O.A.	Lay	1	15 minutes	16 mm.	None
"Posture"	Eastman Kodak Co.	Either	1	15 minutes	16 mm.	$1.00
"Manipulative Experimentation on Animals," physiological effects of stimulation and inhibition on the digestive tract	Ralph Rice in R. I. Institute Laboratory	Professional	1	15 minutes	16 mm.	$1.00
"Osteopathic Mechanics of the Dorsal Area"	Drs. Ralph Rice & Geo. V. Webster	Professional	2	30 minutes	16 mm.	$2.00
"Osteopathic Mechanics of the Pelvis"	Drs. Ralph Rice & Geo. V. Webster	Professional	3	45 minutes	16 mm.	$3.00
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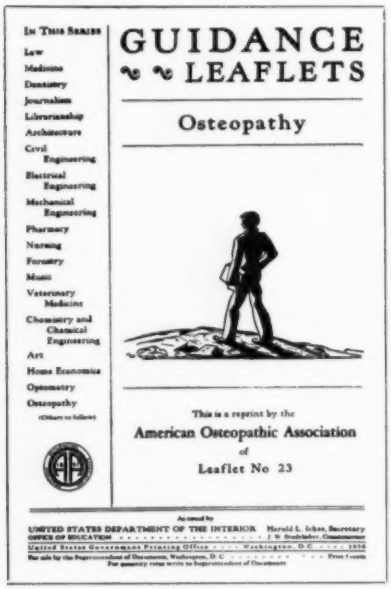

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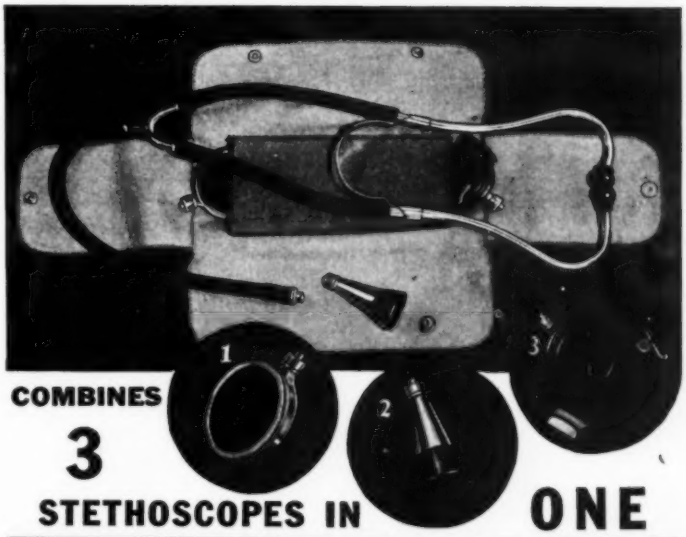

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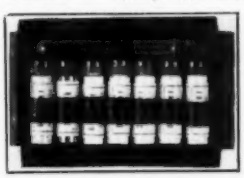

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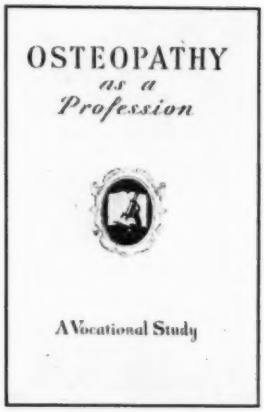

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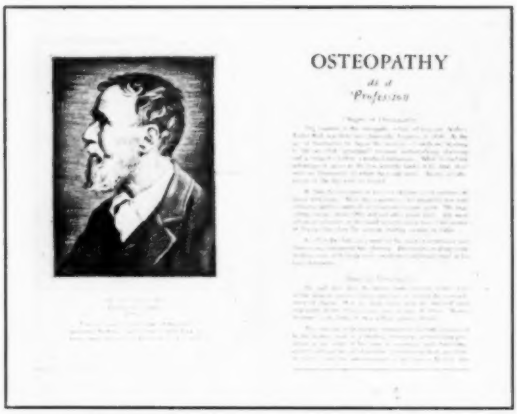

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